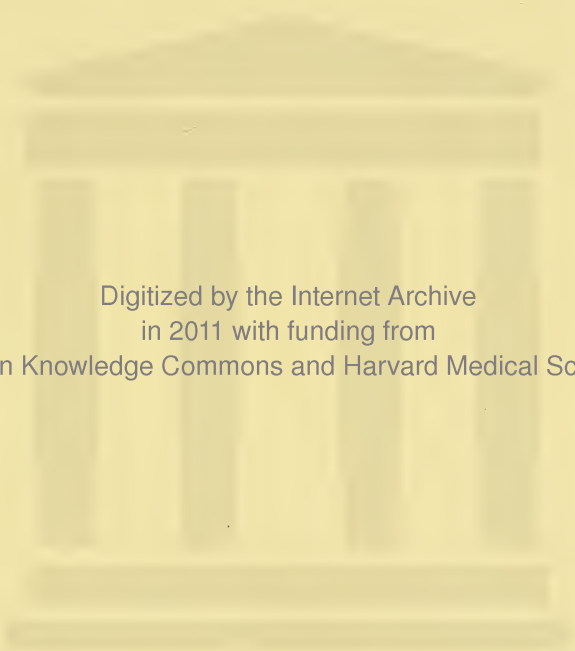




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A N

ESSAY

Of the True

NATURE

AND DUE

METHOD

Of Treating the

GOUT,

Written for the Use of

RICHARD TENNISON, Esq;

Together with

An ACCOUNT of the NATURE and
QUALITY of BATH-WATERS, the Manner of
using them, and the Diseases in which they are proper.

AS ALSO,

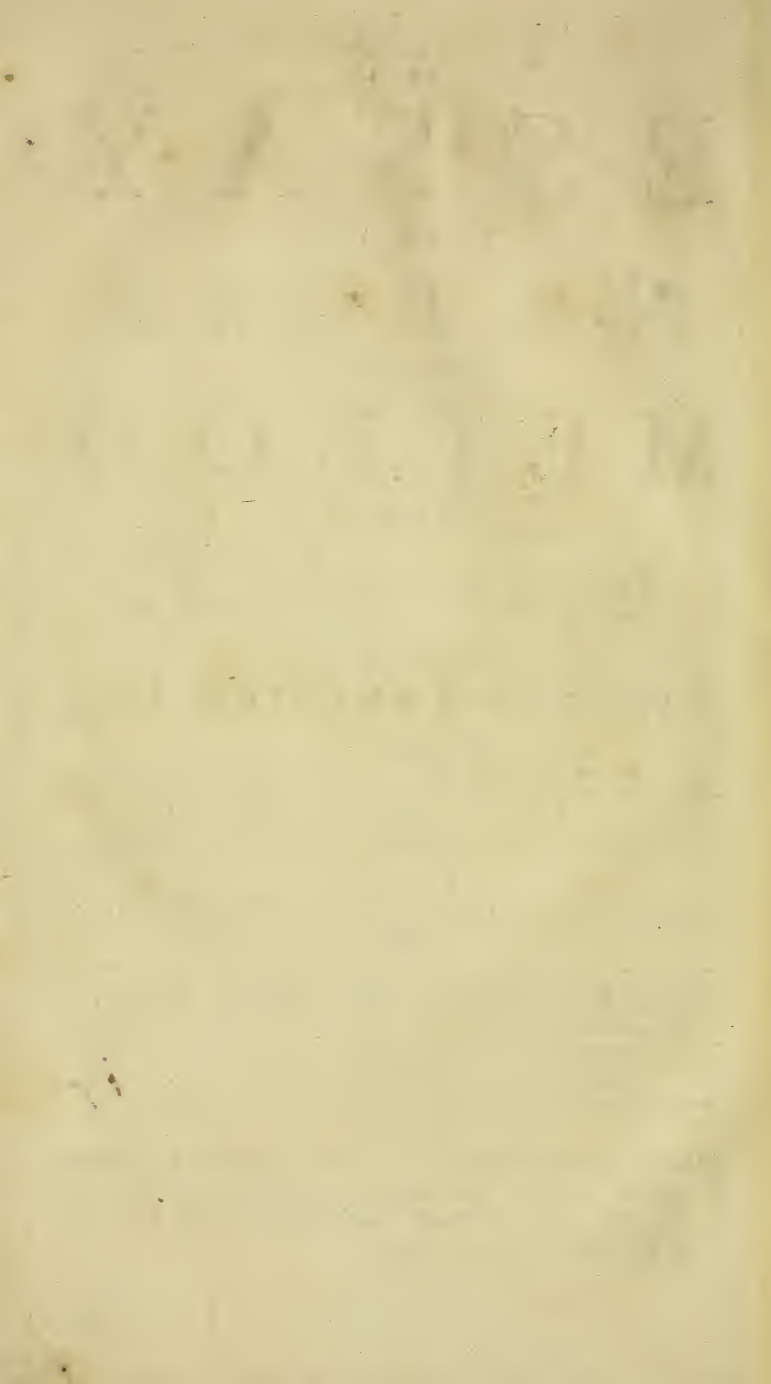
Of the *Nature* and *Cure* of most Chronical Distempers :
Not Publish'd before.

By *GEO. CHEYNE*, M.D. & F.R.S.

The SIXTH EDITION, Revis'd, Corrected and En-
larg'd to more than Double the Former.

L O N D O N:

Printed for G. STRAHAN, at the *Golden Ball*, over
against the *Royal Exchange* in *Cornhill*, and Sold by
W. MEARS, without *Temple-Bar*, and J. LEAK,
at the *Bath*. M. DCC. XXIV.





ADVERTISEMENT TO THE READER!



HIS small Treatise was originally intended for a private Paper of Instructions to the GENTLEMAN, whose Name it bears, to direct Him how to manage himself under the *Gout*: It is, indeed, an Abstract of a larger one; on the same Subject, which has lain by me these seven Years; which, yet, I have not had Leisure or Humour to finish. Several Copies of this having got abroad, and the pitiful Condescendence of pyrating Booksellers,
A 2 even

even to such Trifles as these, have constrain'd me to let it come out in Print, as it is, to prevent its coming out from them. The Gentlemen of the Profession may easily perceive, by the Grossness of the Philosophy, and the low detail of the Pharmacy, it was not design'd for them. If any shall think fit to dispute or criticise on the *Doctrine* here laid down, they may do it securely, as if the *Author* were as much dead, as these his Labours will shortly be : I hope I know the Value of Time and Pains, and the Vanity of all human Speculations better, than to employ them in defending such Trifles. All I undertake for them, is, That the Facts may be depended upon for their Truth : And the Method and Medicines for their Efficacy, towards the End, in the Circumstances propos'd. If any Person under them, shall either amuse himself, by reading this Paper ;

per ; or lighten his Pain, by following its Directions, I shall have obtain'd all I propos'd by it.

As to the Account of the *Bath Waters* given here, it came naturally in the way of my Subject ; and is such as the Observations I have made suggested to me. I scarce know, and have taken no Notice of what others may have written or observ'd on these Waters ; nor, indeed, had it been possible for me, in my present Situation, being without my Books confin'd to Bounds, by the Nature of my Design. I have often observ'd, with Admiration, the Wisdom and Goodness of Providence, in furnishing so wonderful an Antidote, to almost all the *Chronical* Distempers of an *English* Constitution and Climate, which are chiefly owing to Errors of Diet, or rather, as a sacred Writer expresses it,

To

To *Idleness and Fulness of Bread*. The Rankness of the Soil ; the Richness of the Provisions ; the living so much on Flesh Meat ; the inconstancy of the Weather, and the indulging in sedentary Amusements, or speculative Studies directly leading thereto. To remedy all which, *kind Heaven* has provided *Bath Waters* as the most *Sovereign Restorative* in all the Weaknesses of the *Concoctive Powers*.

BATH, *July*, 1720.



POST.



POSTSCRIPT TO THE PREFACE.



*O this Edition I have added several Scholia, to illustrate and confirm the Doctrine, and Observations laid down in the Former. Some further Considerations about the Use, and Virtues of Bathing and Bath Waters, and a good many Reflections and Hints about the Nature and Cure of Chronical Distempers of several kinds, that have any Relation to the Gout, or came naturally into my Way, in treating those others. Physicians know how close a Connection, and near an Alliance Chronical Diseases have to one another. The truly learned * Dr. Friend (and his Fellow-Labourers) have set the Practice of Physick, in acute Diseases, in so clear a Light, and have so Demonstratively*

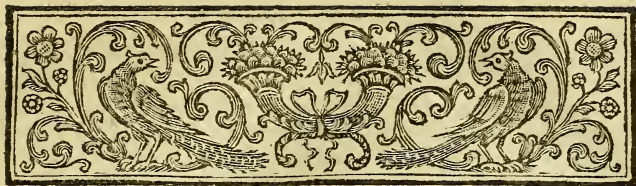
* Vide Dr. Friend, in *Hippocrat*, de morbis populariter grassant. Item *Epistol. de febre secundarit in variolis*. Item *Lommius de febribus*, Edit. Londin.

Postscript to the Preface.

supply'd what was left, as wanting, by their Predecessors, in that part of our Art; that he must be very lazy, or very dull, who may not form to himself clearer Indications, and more distinct Views in this difficult Work, than could have been readily fram'd till now. And the worthy, and learned, the President, (Sir Hans Sloan) the Censors, and other Fellows of the College employ'd, have lately supply'd the World with a Body of Pharmacy, and Forms for Shop-Medicines, the most simple, neat, judicious, and copious, that ever yet appeared in Print; which will exceedingly promote the Practice of Physick in general. But Chronical Cases fly great Towns, their Hurry and Smoak, and rejoyce in Country Air, Diet, and Exercise; and generally, all those who suffer under them, at one time or other, land here at Bath as the last Resource. In about twenty Years Experience, I could not well pass over so many Cases as I have seen without Reflections and Observations on them. A few of those I have communicated to the Publick, with the greatest Plainness and Sincerity I could, without (I hope) any other View but that of being somehow useful in my low Station. If but a single Person receive Benefit by them, I shall undisturbed, and with much Tranquility, stand all their other Consequences.

BATH, June, 1721.

THE



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*N. B. The Contents of the Additions are
mark'd with an Asterisk *.*



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ibid.

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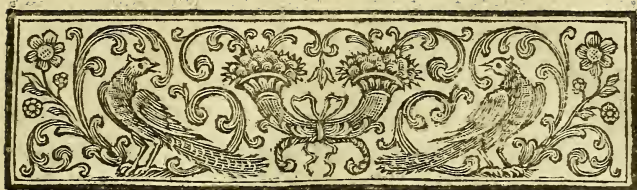
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A N
E S S A Y
Of the True
N A T U R E
A N D D U E
M E T H O D
Of Treating the
G O U T, &c.

I.  Esigning this Paper for the Instruction and Relief of my particular Friend, I shall only make such Observations, as directly tend to that Purpose; passing by all *Theories* of the Distemper, as far as is consistent with giving the Reason of my Opinions. For after having
E laid

laid down two *Propositions*, (which will be found the Principles of my Reasoning through this Discourse) I proceed to the Observations themselves.

II. *Prop. 1.* Of two Men having all other Circumstances alike, as near as may be ; of the same Parents ; born healthy ; of the same Stature, Complexion, Diet, Air, Exercise, &c. It seems to me impossible to assign a solid Reason, why the one should be afflicted with the *Gout*, the other be absolutely free from it, but this, That the * smallest Vessels of the *gouty* Person must be in their natural † Conformation narrower and more || stiff, than those of the other, who is free from the *Gout*, in respect of their common Stature and Size. For thereby the crude and gross Humors, which are confin'd, or pass with Pain, in the *gouty* Person will easily flee off by Perspiration, and the other Drains of the Body, in the Person free from the *Gout*.

III. *Scholium.* This *Proposition* is evident from hence, That the *Gout* seldom seizes on People till towards the Beginning of the Decline of Life, when the Solids having attain'd their utmost *Dimensions*, and being stretch'd out to the full Length they have to

* *Capillaries.*

† *Make.*

|| *Tense.*

reach,

reach, become in some Measure *stiffen'd*, at this their full stretch : (So that in the greater Vessels, by long Age, they become *bony*) and the Juices are render'd gross and glewy, whereby the Perspiration (for both Reasons) is considerably lessen'd and impair'd. Now, though in this Account of the Cause of the *Gout*, I lay little Stress on the *relative Smallness* of the *least Vessels*, but am rather inclin'd to attribute it chiefly to their greater Stiffness and Tension: Yet is it *demonstrable*, that in the same *springy Tube*, full of the same Liquor, moving by one constant, original Force, its *Diameter* is less in a contracted, than a relaxed State ; though the *Velocity* of the included Fluid will be greater in the *First* than in the *Second*, because of the greater Resistance and Springiness of the *contracted*, than of the *relaxed Tube*. And this is one Reason, why Women are less subject to the *Gout* than Men ; because of the known greater *Laxity* of their *Fibres*. And it is evident from *Observation*, as well as Philosophy, that healthy *fat* Persons have a less Quantity of Blood, and smaller Vessels, than *lean* Persons, in proportion to their *Bulks*, as every *Surgeon* can attest. Their Vessels are more compressed by a Load of Flesh ; *fat* Persons are less weildy, and so are less able to stretch out their Vessels to their utmost Limits : But principally because that *oily* Substance called *Fat*, can never be so plentifully separated in the greater, as in

the proportionably lesser Vessels, which have run out to the greatest Length, as is evident from the known Laws of *Secretion*: Even though it be certain that *lean* Persons can eat and digest a great deal more, in respect of their Bulk, than *fat* People; which should more plentifully supply them with Materials for *Fatning*, were they not carry'd off by larger Vessels, and more liberal Evacuations.

IV. *Prop. 2.* The Cause of an acquir'd *Gout* in the first Person, or in those born of sound Parents, seems to me, to be the Abundance of tartarous, urinous, or other Salts, introduc'd into the Blood by the Food. Salts seem neither to perish, nor to be begotten; but to be constant and incorruptible Parts of animal and vegetable Bodies. The Delicacy and Flavour of Flesh and Fish, is entirely owing to their abounding with a fine, soft, oily, or urinous Salt, as is evident in Venison and wild Fowl. Wines of all kinds, have a greater or lesser Quantity of Tartor in them: And other strong Liquors abound in their peculiar Salts, in proportion to their Strength. Spirits are nothing but a great Quantity of vegetable Salts crowded together in a little Water and Oyl. These Salts receiv'd in Abundance, but neither sufficiently broke by the digestive Powers, nor driven out of the Habit by due Exercise; but by their Plenty and Nearness, uniting in greater Clusters, must necessarily

necessarily form Obstructions, and give Pain, when by the Force of the Circulation, they are thrust through narrower and stiffer * small Vessels. Nothing either receiv'd or bred within the Body, besides these Salts, can account for this Difference.

V. *Schol.* This may seem too *general* a Way of accounting for the more immediate Causes of a *particular* Distemper ; since the same Principles, with proper Limitations from Circumstances, will account for most *Chronical* Diseases. But, I fear, this is as near the Matter, as just *Observation*, and sound *Philosophy* will bear us out. To indulge *Imagination*, and say, That the specific Cause of the *Gout* is an Union of an *urinous* and *acid* Salt (as perhaps the *urinous* may arise from an *acid* Salt united with an Oyl, or Sulphur) possibly the Appearances of the *Gout*, and the *Materials* out of which it is produced, might make it look, neither without *Verisimilitude*, nor without a specious *Show* : For it is *Fact*, that abundance of *urinous* Salts disposes towards *Inflammations* ; and plenty of *acid* Salts, tares, rends, and excites *Pain*. High season'd rich Foods supply the *former*, as generous strong Liquors, (the Diet of the *Gouty*, as is afterwards shewn) do the *latter*. But these *gay*

* *Capillaries.*

Dreams I leave to those, who delight to dwell in the Fools *Paradise*. That in general, the Cause of the *Gout* is such as I have describ'd, is evident. (1.) From the hot, twitching, scalding Humour, descending the Thighs and Legs, on the first Attacks of the *Gout*. (2.) From the violent *Inflammations* and *Pain* on the Part where the *Gout* fixes. (3.) From the large *Tumor* arising on the Place affected. (4.) From the Swelling of the Veins over this *Tumor*, and from it towards the *Heart*. Which can arise from nothing but the Mixture of the *goutish* Humour with the Blood (rendring it more sizy) directed thither by the Order of the *Animal Oeconomy*, and made more perspicuous, and increas'd by the Pressure of the *Tumor*, and the sharp Steams issuing from it, and piercing the Coats of the Veins. And this Disposition of the *Blood* is carry'd on till the *Veins* enlarge so at their Return, that it has Room enough to pass without Resistance. All these shew a gross, ill-condition'd *Humour*, carried even by the Blood-Vessels, or separated immediately from the Blood by the small Glands; an *Humour* by far too gross and sensible to reach the *Nerves*, or their Juices. The Nerves, I say, whose *Perviousness* is uncertain, and the *Fluidity* of their Contents much more so. But, to be sure, their *Minuteness* is such, as not to suffer so gross an *Humour* to pass them.

VI. *Coroll.*

VI. *Coroll. 1.* Hence we may learn the Reason why, on the first Attacks of the *Gout*, in otherwise healthy People, the Humours generally fall on the Joints of the Limbs: Because, in the Joints, the smallest Vessels are more compress'd by the larger Heads or Protuberancy of the Bones, and are thereby render'd narrower, and more readily obstructed. These Obstructions fall on the Joints of the Limbs; because of the greater Length of these small Vessels, between the Heart, the Origin of the Motion of all the Fluids, and these Joints; their other Extremity: Whereby the Quickness of the Circulation diminishing, Obstructions are there more readily form'd.

VII. *Schol.* By the smallness of the *Glands* in the *Joints*, the natural Coldness of these Parts, their Distance from the Heart, their Compression by the larger Extremities of the Bones, the Weakness of the *inward Motion* of the Parts of the Blood, upon one another, and thereby their Readiness and Disposition to beget Obstructions there; the *Joints* become more liable to *gouty* Indispositions. See *Keill's Tentamina.* pag. 123.

VIII. *Coroll. 2.* Hence likewise we may see the Reason, why the first Fits, of otherwise healthy Persons, enrage and remit once in
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four and twenty Hours. The * Access being at Sun-set, and the † Remission about Day-break : Why the whole Fit in such lasts about fourteen Days. And lastly, Why the particular Accesses and Remissions of Persons advanced in Years, and broken with the *Gout*, happen only once in fourteen Days. And why the whole Duration of the Fit is made up of several such Accesses and Remissions in equal Times. In the first Stages of the *Gout*, the Fluids being less sily and glutinous, their Salts and Siziness are sooner broken and dissolved by the Action of the Solids in the Circulation ; and are thereby sooner brought into a Condition to be carried off by Perspiration ; which makes an Access and a Remission. The greater Weight and Grossness of the Air (which hinders Perspiration) at Sun-set, beyond what it is at Day-break, together with the particular Degree of Siziness, seems to determine the Times. The greater Degrees of Siziness in the Fluids of People advanced in Years, and broken with the *Gout*, lengthens out the Duration of these Accesses and Remissions. And the precise Period of fourteen Days, seems to arise from the special Nature of the Siziness of the Fluids, and its Resemblance to that of a regular intermittent Fever. The whole Duration of whose

* *When it begins to enrage.* † *When it begins to be easier.*

Fits put together, *Sydenham* has observ'd already, to be equal to fourteen Days. But the particular Explication of all these Things, wou'd require more Room than can be allow'd them, in the Bounds I have prescrib'd to my self. My Friend, if he pleases, may consult *Bellini* on this Head.

IX. *Schol.* *Determin'd* Causes produce determin'd Effects, and a determin'd Degree of Siziness in the Blood, all other Circumstances continue the same, will require a *determinate* Time to be duly diluted, broken, and thinn'd. In inveterate *Gouts* and decay'd Constitutions, the Period of *twenty four Hours* is lengthen'd out into *fourteen Days*. It is demonstrable, that *chronical* Distempers would have their Periods, or terminate of themselves, as well as acute ones; if the *Cause* that produce them, and the Feuel that feeds them, were as readily to be withdrawn in the first, as in the last Case. In *Islands*, especially those of our *Northern* Climates, the Inconstancy of our *Seasons*, the Inclemency of the *Weather*, the *Intemperance* and *Grossness* in Diet, and the *Inactivity* of the People, make these *Periods* less obvious and manifest, than they might be in *Eastern* Countries, and warmer Climates, where all these Things came on, and subsisted in a more uniform manner: Nevertheless, ev'n amongst us, there are manifest *Footsteps* of these *Periods*,

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in some *chronical* Distempers. I have seen a *Rheumatism* in five or six Weeks Time, terminate by meer Abstinence. I have known an *Anasarca* perfectly cured in five Months time by obstinately abstaining from Drink. I have observ'd a *Cachexy*, of many Years standing, from an exceeding low State, in a Month's time, end in a daily Recovery ; and these *Periods* have generally happen'd about *August*, or towards the *autumnal Equinox*. Tender, weak, valetudinary, and low People, especially those who labour under Diseases, arising from a *relaxed* State of *Nerves* sink, droop and decline, towards *Christmas* ; and seldom get up till towards *Midsummer*. Those who are lowest, begin sooner to decline, as they likewise get up sooner, because less Force acts more strongly upon them, than upon the others. Many useful Observations have been made upon the Effects of the *Conjunctions*, and *Oppositions* of the two great *Luminaries*, on nervous and *cephalick* Diseases, by the ingenious * *Dr. Mead*. On some such Persons, especially the most weakly, and dispirited, the *Sun* has an Influence, much the same as it has on *Plants* and *Vegetables*, or on the *Summer Animals* (such as *Insects*, *Batts*, *Owls*, *Swallows*, *Dormice*, &c. which are in a State of *Insensibility*, and *Inactivity*,

* Vide *Mead* de Imperio Solis, & Lunæ, &c.

during the *Winter Season* ; but whose *Juices* are rarified and expanded, the *inward Motion* of the Parts of their Fluids upon one another, increased and strengthened, their *Circulation* promoted and enlarged, their *Perspirations* quickned and augmented, and their *Spirits* chear'd and enliven'd, by the kindly Influences of this *material Deity*. And during his Absence, the quite contrary happens to them in all these Instances. They are truly natural *Thermometers*, and their *Juices* rarify, or condense. Their *Perspirations* rise, or fall, as this external *Source* of Life and Activity influences them. It is past all Manner of Doubt, that all acquired chronical Distempers, would in time, terminate of themselves, have their Periods of remitting and enraging, from the natural *Drains* of the Body, the Actions of the Solids, and the *internal Motion* of the Fluids, if new Fuel were not supply'd them from Time to Time.

X. *Coroll.* 3. Hence we may discover the Reason of the common Observation, that gouty Persons are People of good natural Parts, large Feeders, and long-liv'd : Because the Fibres of the smallest Vessels, being more stiff and springy than ordinary, the Circulation is brisker, more full and free ; whereby the * na-

* That is Eating, Digesting, and Evacuating, &c.

tural Functions are more readily and regularly perform'd ; and therein the best Health and trueſt Sensations conſiſt : Strong Health requires liberal Supplies ; and both together lengthen out Life.

XI. *Schol.* On the other Hand, this conſtant, and univerſal Obſervation, (*viz.*) That *gouty* Perſons are commonly found ſtrong, healthy, active, acute, and prudent Perſons, is a manifeſt *Demonſtration* of the Truth of the firſt *Propoſition* : All theſe pointing and proclaiming a ſtrong, ſtiff, ſpringy, and contracted State of *Fibres*, and *Nerves* : Such a State of *Fibres* and *Nerves*, being abſolutely neceſſary to ſuch a Conſtitution. And it may not be amiſs to obſerve, that when *Age* and the *Gout* have ſubdu'd, relax'd, and ſoftened the nervous *System*, all theſe are proportionably impair'd, and therefore a more ſtiff, ſtretched, ſpringy State of the Nerves, and Fibres, is an abſolutely neceſſary Condition towards the *Gout* : And this Condition plainly points out the true Method, both of Cure, and of relief in it.

XII. *Coroll.* 4. From theſe alſo, we may diſcover what a Fit of the Gout is, to wit, an Effort of Nature, to throw off this Abundance of Salts, through more ſtiff and narrow * Strainers. Salts of all Kinds are more or

* *Secretory Duſts.*

less* burning: The Urinous most of all, as is evident from *Spanish Flies*, and that unextinguishable Substance, call'd the *Phospheros*, so readily and plentifully to be had from human Urine. (The Reason of which may be from their pointed Figure, piercing more readily by its being besmear'd with a light Oyl: Or from their greater active Force; or from some other Quality, not yet, or perhaps never to be discover'd.) What is certain is this, That Persons of a large appetite, as *gouty* Persons generally are, feeding plentifully of Flesh and Fish, and drinking liberally of generous Wines, or other strong Liquors, and using, either too little, or too much Exercise, must necessarily overstock their Blood with these fix'd and incorruptible parts of animal and vegetable Bodies; which in their Nature being hard and burning, can't fail, first, to raise a Tumult and Fever; and then to give violent Pain, as they are driven out of the Habit, through more stiff and narrow small Vessels by the Force of the Circulation: So that a Fit of the *Gout* may be consider'd, as a *Crisis* of a putrid Fever, wherein the noxious Humour is thrown upon some of the Muscles or Joints of the Body.

XIII. *Coroll.* 5. Hence we may discover the Vanity of the Pretenders, to a certain and uni-

* *Caustick.*

versal Remedy for the *Gout*. For unless a Remedy could be found, which at once cou'd change and new-mould the solid Parts of human Bodies ; alter the Nature and Qualiies of animal and vegetable Bodies ; and destroy Parts that are in their own Nature fix'd and permanent, it is impossible it should be certain and universal ; and how possible such a Remedy is, I leave every one to judge.

XIV. *Coroll. 6.* Hence it is evident, there can be only two direct Ways of treating the *Gout*, with any Prospect of Success. The one is, by stretching and winding the Capacities of the small Vessels, and * relaxing their *Fibres*. The other is, by lessening the Quantity of the Salts introduc'd into the Fluids by the Food ; these being the two Antidotes or Opposites to the two fundamental Causes of acquired *Gouts*.

XV. Here it may be convenient to take notice of the Difference between hereditary and acquir'd *Gouts*. The latter is produc'd in a Person, otherways sound, from Ignorance or Negligence of the exact Rules of living. For tho' there be a natural Configuration of Parts, that disposes one Man more than another to the *Gout* ; yet there might be a Method of Diet order'd which shou'd prevent it. The

* *Slackning.*

former is a * Taint (compounded perhaps of Scurvy, Stone and Pox) transmitted to the Patient, with the Principles of Life, together with a Disposition in this Taint, to unite it self to any Malignity, introduc'd into the Habit, through Excesses.

XVI. *Coroll.* Hence we may observe the Necessity of a much more strict and careful Management, in hereditary *Gouts*, than what is necessary in acquired ones. In the first, the *gouty* Humour is ingrain'd and transubstantiated into the Solids, and other Principles of Life, and impossible to be rooted out by human Art and Industry: The most that can be done is, to lessen and relieve the Symptoms. Whereas in acquir'd *Gouts*, the noxious Humour being more confin'd to the Fluids, a proper Diet, due Exercise, and a few well-chosen Remedies, may go a great way; if not to a perfect Cure, yet to make Life tolerably easy under them.

XVII. *Schol.* That *Gout*, *Scurvy*, *Pox*, and *Kings Evil*, are communicated to Posterity, is certain: And yet on the common Principles of *Generation*, it is not easy to imagine, how they can be, unless we conceive, that the Grossness of these Infections subtilizes, as the Principles of *Animal* Bodies lessen. We see

* *Stain.*

in *venereal* Distempers, that inveterate Degrees of them, and imperfect Cures, leave a subtile *Steam*, *Stain*, or *Vapour*, which affects the *Bones*, *Membranes*, and *Nerves*; even, when the gross Matter, which manifests it self in *Ulcers*, has been expelled. I have seen the most exquisite Pain, and Misery, which even *Opium* it self could not stun, when no outward Symptom appeared to manifest the Distemper. I have always suspected (and I think not without reason) that the *Valetudinary*, low State, and *nervous* Complaints of the thin, Hereditary, *Hysterick*, and *Hypochondriac*, were owing to a latent *Scrophulo*, or *Scurvy*: And I have generally found, that some time or other, they have manifested themselves. The last in foul Faces, gross, and thick Rashs, blue scurvy Spots, and other out-breakings of the Skin, which by no means could either be kept out, or perfectly cured. And the first in chilblain'd Fingers or Toes, swell'd and scirrrous Hands, thick Lips, inflam'd Eyes, white Swellings, or knotted Glands in some Parts of the Body; or have generally terminated in *scrophulous* Consumptions, with *Ulcers* or *Tubercles* on the Lungs, in *Fits* or *Convulsions*, or incurable *Loosnesses*, from knotted *Guts* or *Mesentery*, And this Observation has been of some ute to me, in pointing out the combining *Antiscorbuticks*, or *scrophulous* Remedies (which do not much differ) together with nervous Remedies,

medies, and a strict Diet, or Regimen in such Cases. And this shows likewise, how useful *Bath Waters* are in them, contrary to the Opinion of them, who will not allow 'em proper in *Vapours* or *Melancholy*.

XVIII. Of all those Things that a *gouty* Person can safely undertake for his Health, wisely manag'd Exercise, seems that alone, which can best answer one Part of the first Intention, *viz.* The widening the Capacities of the small Vessels. Labour or Exercise assists the *Gouty* three different Ways: *First*, As it increases the * Motion of the Parts of the Fluids among themselves; so that their Salts, by their † striking one against another, are broken and made less, that they may pass more readily through the small Vessels. *Secondly*, As it adds a new and *foreign* Force to the Blood, and thereby promotes its Circulation from the Heart through the small Vessels; driving some of the grosser Parts of the Fluids through them, which in the ordinary Course of the Circulation wou'd not pass so freely; and thereby opening their Obstructions, and enlarging their Capacities. *Thirdly*, As it increases the natural Perspiration; the Action of the Muscles in Labour and Exercise, and the Spring of the Solids by their multiply'd Efforts, squeezing the Strainers of all their

* *Intestine Motion.*

† *Collision.*

Contents. But to make Labour and Exercise as useful as they may be, two Cautions must be added to them: *First*, That they be not too violent, in respect of the Patient. For too violent Exercise will, necessarily, either spend the Spirits, whereby the Digestions and Circulation will be impair'd; and so a regular *Gout* be brought into an irregular one: Or by shaking all the *gouty* Salts at once upon the Extremities, a regular Fit will be forc'd out; which, in less violent Exercise, might have been spent by Perspiration. *Secondly*, That Moderation in Eating and Drinking be join'd to it; for commonly *gouty* Persons are large Feeders; and Exercise emptying the Stomach, the Guts and small Vessels, if the Appetite be satisfy'd to its Craving, the Evil is rather increas'd than diminish'd thereby.

XIX. There be two direct Ways of lessening the Quantity of the Salts, which produce the *Gout*. The first is, by a total Abstinence from, or a great Abstemiousness in Flesh, Fish and strong Liquors, which introduce those Salts into human Fluids. But this Course is never to be undertaken, but with great Caution, and in the last Extremity: For these two Reasons; *First*, Because an entire Vegetable Diet weakens all the digestive Powers, and all the Functions of Life; impoverishes the whole Mass of the Fluids impairs the Strength, and dissipates the Man: And thereby necessarily

ly begets the worst kind of Hysterical and Hypochondriacal Disorders, and all their black and dismal Consequences (at least till the Body has been long accustom'd to it) which is a Disease far worse than the *Gout* itself: And to which the *Gout* only brings the Patient, in its last and fatal Stages. *Secondly*, Because this Diet, once enter'd upon, is never after to be chang'd, under the Danger of certain Death, or the most violent enraging of all the *Gouty* Symptoms. For a Vegetable Diet, as has been just now hinted, weakening the digestive Powers, and all the Functions of Life, &c. The Patient can never after be brought to bear with a free way of living, without the Hazard of certain Death, or a violent enraging of the *Gouty* Symptoms; as is too plain from many fatal Instances. If any Diet is ever to be try'd in the *Gout*, it is to be order'd in *Cornaro's* Method; that is, by living on the white Foods; eating Flesh and Fish of the lightest Digestion, and drinking generous, unmix'd Wines, both of them in small, and constantly equal Quantities, in Weight and Measure; upon the Craving of the Appetite, and proportion'd for the mere Support of Life.

XX. *Schol.* The Case of a Person is well known to me, who to daily Exercise, and riding on Horse-back, and other proper Remedies, added four Years of a strict *Regimen*, or Diet, to restore a gross *Scurbutic* and *Cachectic* Ha-

bit, which was introduc'd by an *Autumal* Ague. The first Year was spent in a gradual Decrease from a full to a low Diet. In which, *Breakfast* and *Supper* were near a Quart of *Asses Milk*; and *Dinner*, boil'd Chicken, Veal, or Lamb, with boil'd Milk, and Water for Drink, and not above a Glass of Wine. The two middle Years were spent in a rigid *Milk* Diet, religiously confined to Bread and *Milk* only. The end was obtain'd, the Juices sweetened, all the *Scorbutic* Sores heal'd up, the Appetite restor'd, the Spirits render'd light and easy. The last Year was spent like the first, in a cautious and gradual Entry upon a fuller Diet, with a just Sense of the Danger, either of satisfying the Appetite to the full, which then grew craving and ravenous, or advancing too quickly upon strong Food, for which the concoctive Powers were not equal. Three Fourths of the whole Deit being *Milk* Meats, and the rest Flesh of the lightest Digestion. Yet had the long continued low Diet, so far impoverished the Fluids, cool'd the natural Heat, and relax'd the Solids, that they were not sufficient even for this so slow a Change: So that the Person in the following Spring, was thrown by it, into a lingering, dangerous, *putrid Fever*, wherein his Life was despair'd of by all his *Physicians*. The *Prince* of *Conde* also, after having long suffered, and being quite overcome by the *Gout*, was advis'd by his *Physicians* for the

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Relief of his Pain, to enter upon a *vegetable Diet*, and a total Abstinence from Fish, Flesh, and Wine. It succeeded accordingly, his Pains were relieved, and the *Gout* overcome. But at the Marriage of his Daughter, in the Jollity of the *Festival*, being tempted to drink a little Wine. He, from one Step to another, was drawn into his former Way of Living; the *Gout* returned with greater violence than before, and cut him off in a short Time. *Cornaro* tells of himself also, that being past Threescore, he was advis'd both by his Friends and *Physicians*, to increase his constant and measur'd Diet, by two Ounces of Meat, and two Ounces of Wine only: Because, said they, the *Decays* of Age wanted more liberal Supplies, than the Vigour of Manhood, or the growing Strength of Youth. He for a long Time resisted their Importunities, having been by his low, and uniform Diet, recovered from the insufferable Torments of the *Gout* and *Cholic*, which had render'd his Life very miserable, for many Years before, into an indolent, calm, and confirm'd State of Health. However at last being overcome by them, in less than a Year's Time, he was thrown into a dangerous, *malignant Fever*, which almost cost him his Life, escaping narrowly through the Force of his Temperance.

XXI. The other direct Way of banishing the Salts out of the Habit, is by Evacuations.

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Sydenham, otherwise a most accurate Observer of Nature, and a most judicious Practitioner, has been the Occasion, I think, of a great Mistake in the Management of the *Gout*; by forbidding almost all Evacuations, either in the Fit, or in the Intervals, for fear of weakening the Constitution. There are two Seasons, to wit, Spring and Fall, when the Periodical Fits of regular *Gouts* commonly happen; which I consider as cardinal and critical Discharges, under general and mechanical Influences, for purifying the Blood, and discharging the *gouty* Salts: In which Nature is no more to be disturb'd in its Operations (I mean as to Purging, for even then a gentle, flow, constant and uniform Perspiration and breathing Sweat may be promoted, not only safely, but with great Advantage) than in the monthly Purgations of the Sex. But in light, flying Touches of the *Gout*, out of these Seasons; and in the Intervals of the Fits, gentle, warm, stomachic Purgers will be an excellent Remedy to send these a going, to lessen the Fits, and lengthen the Intervals. A Person out of the Pain and Inflammation of the Fits, and in their Intervals, (except his natural Disposition to breed another Fit) is, to all Intentions of Medicines, the same as a well Person. And all Medicines levell'd against other Diseases incident to human Bodies, may be as safely administer'd to a *gouty* (Regard being had to his particular Constitution)

as

as to any other Person. Wherefore, the general and direct Methods of relieving the *Gout*, are, in the Fits, a gentle, uniform, continu'd Perspiration and breathing Sweat ; In the Intervals, Labour or Exercise, and gentle, Stomachic Purgers.

XXII. The Secondary or less direct Methods of relieving the *Gout*, are principally these two, *First*, Dilution, by proper Liquors. *Secondly*, Strengtheners of the Instruments of the Digestion. Nothing is more likely to thin the Blood ; to dissolve and break the Salts, and keep them at a Distance from running into Clusters, than proper Diluters ; as we see in Fevers, Rheumatisms, and other inflammatory Distempers. For this Reason, among others, it is, that *Bath* and *German Spaw* Waters, and all other *Mineral Chalybeat* Waters ; Dwarf-elder Tea ; Trifoil Tea ; light, quick, Green-Tea ; small spicy Bitters on Water, and such like, drunk freely, Blood warm, on an empty Stomach, become so useful in Intervals of the *Gout*. Water is the universal Dissolvent of Salts of all sorts ; and being replenish'd with the spicy, bitter and active Parts of other Bodies, it strengthens the Stomach and Bowels ; breaks and dissolves the Salts ; cleanses the insides of the Vessels from the Foulness that constantly adheres to them, and carries it out of the Body, by increas'd Perspiration and Urine.

XXIII.

XXIII. Strengtheners of the Instruments of Digestion, are an excellent Remedy in the Intervals of the *Gout*. If the Digestions be true and good; the Parts of the *Chyle* be made sufficiently small, and the Circulation be full and compleat (all which are the common Effects of Stomachic Medicines) the Salts will be less; the Obstructions of the small Vessels fewer, and the Impurities of the Fluids will more easily pass by Perspiration, and the other Drains of the Body; and so the Fits of the *Gout* become more easy, and less frequent. Among all the Strengtheners of the Digestions, I wou'd recommend a strong Infusion of the *Jesuit's Bark* in generous Claret, as being the coolest Bitter, the most powerful Strengthenner of relax'd *Fibres* in the Instruments of Digestion; and the greatest Antidote of the urinous Salts, especially if join'd with *Chalybeats*, and some Qualifiers of its maukish and nauseous Taste. The Bark has the same Effect on the Coats and *Fibres* of the Vessels, that Oak-bark has on raw Leather; and the same Effects on the Fluids to prevent their Coagulation; and to render them uniform, that the *Testaceous* Powders have on Vinegar, or as they have on Milk, to prevent its Curdelling: But more especially, as it produces such Wonders on the Solids and Fluids in intermittent Fevers; to the State and Condition of both which, the Solids and Fluids of *gouty* Persons bear so
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near a Resemblance, as has been observ'd in *Coroll.* 2. Wherever the Bark is proper, I recommend the *Glans Quercina*, or Acorn, as of the same Class of Medicines, and in some Cases of Relaxation exceeding the other. It is cool and easily digested ; but they do best united. All bitter and spicy Medicines have more or less of the same Quality ; but heat the body more, and brace the *Fibres* less.

XXIV. *Mercury*, by its Weight, and its constantly forming it self in little Spheres (or perhaps from its greater attractive Force) throughout all its possible Divisions, seems to offer fairest, of any internal Medicine, for breaking the *gouty* Salts ; for relaxing the *Fibres* ; and enlarging the Capacities of the small Vessels. And the Fact is, that by a full and free Salivation, *gouty* People have been freed from all its Symptoms for several Years. But it is also Matter of Fact, and Experience, that a full and free Salivation does so break, rend and tear all the smallest, tenderest, and finest Vessels and *Fibres*, that the Body becomes in a worse State, in respect of the future Fits, than it would have been in several Years time, under the common Symptoms. For tho' a Salivation may open all the Obstructions of the small Vessels ; cleanse their Insides from the Foulness that cleaves to them ; purify the Blood, and break its saline Impurities ; yet by its great Weight, and the excessive Force it

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adds to the Blood; rending and téaring the finest Vessels and *Fibres*; when the *gouty* Persons comes to his former Diet, and the other Circumstances of Living; and the Fluids become thereby loaded with their Salts, they stick more obstinately to the Joints, than if the Parts had been subdu'd and broken by regular Fits of the *Gout*. So that a Salivation, tho' it banish the Fits for some time, yet when the Blood is replenish'd again with *gouty* Salts, the Habit is reduc'd to a worse Condition, in respect of the future Fits, than if they had never been interrupted: And, indeed, it is observable, that after a full, or repeated Salivations, the Man is seldom or ever the same, as to the Quickness of Sensation; or the Usage of the most beautiful animal Faculties. But there is an absolute Necessity of having recourse to *mercurial* Vomits and Purges, when the *Gout* becomes fixt to, and permanent in a Place, as also when it is dispersed all over the Habit, like a Rheumatism. These active Medicines must first render the Humours fluid, which *Gum Gaujac*, with Diaphorick *Antimony*, persisted in, will afterwards carry off. I come now to consider the *gouty* Person under two different Circumstances. *First*, under a regular Fit. And, *Secondly*, in the Intervals.

XXV. 1. On the *First* Attack of the Fit, especially while the Fever, that ushers it in, remains, Dilution is the only Remedy. Fine,
clear,

clear, old small Beer, with a little old Mountain, or *Madera* Wine; Water boil'd with a few spicy Seeds, mix'd with these Wines: Water Gruel with some Wine or Hartshorn-Drink with Cinnamon; and little or no Flesh Meat, will succeed best during all the time of the Fever. After the Fit is distinctly form'd, the milder Cordial and Stomachic Medicines, which promote a gentle Breathing Sweat (I mean in the more compounded and tedious Fits of the *Gout*, chiefly in Persons advanc'd in Years) such as *Gascoin* Powder, *Goa* Stone, *Bezoar*; Sir *Walter Rawleigh's* Cordial, *Diascordium*, Confection of *Alkermes*, and the like, wash'd down with clear Blood-warm Sack-whey; in every Draught of which ten or fifteen Drops of Spirit of Hartshorn has been first pour'd; with Flannel on the Parts, and much lying a Bed; such a Method, and such Medicines, I say, will best forward the Fit. Towards, the Decline, the stronger, warmer, spicy and Stomachic Medicines; such as *Serpentary* Root, *Casamunair*, *Zedoary*, old *Venice* Treacle, *Electuarium de Ovo*, and such like; with a few Grains of *Camphir*, and Salt of *Vipers*; and a good Stomach Bitter on Wine to wash them down, will finish this Affair, strengthen the Bowels, and prevent the Recoil of the *gouty* Humour on them. And here it may be taken Notice of, that as the Fever, that ushers in the *Gout*, is, so will the Fit be: If the Fever is short and sharp,

the Fit will be so likewise, in regular *Gouts*: If it be feeble, long and lingering, the Fit will be such also, In the Management of the foregoing Method and Medicines, two Cautions are to be minded: *First*, That during the whole Fit, Liquors may be more freely and safely indulg'd, than solid Foods. For Repletion from solid Foods, in a Fit of the *Gout*, might be of fatal Consequence, by rendering a regular Fit of the *Gout* irregular, whereas Fluids will certainly pass, either by Perspiration, Sweating, or Urine. *Secondly*, The Cordial Medicines are always to be regulated, by their Lightness on, and Agreeableness to the Stomach of the Patient; (for whatever makes him sick, will more or less draw in the *gouty* Humour on the Stomach) and by their not rendering him more hot and restless, than the *Gout* it self would naturally make him: For if they produce an agreeable Sensation on the Stomach, and do not inflame, they will necessarily procure Coolness and Quiet.

XXVI. Here it may be consider'd, whether *Opiats* may be safely given in a Fit of the *Gout*, to procure Rest, and alleviate Pain. In the general, it is the safest side, not to administer any kind of *Opiats* in the Fits; because they constantly pall the Appetite, and leave a Nauseating, and perhaps a Reaching on the Stomach, the readiest way to bring the *Gout* there. But in Extremities, when the Pa-

Patient has been many Days without Rest, and the Pain becomes intolerable, all other Means failing, or equally dangerous, *Opiats* may by so qualified, and their mischievous Effects so bridl'd by joining spicy, nervous and Stomach Medicines to them, that they may become an excellent Remedy. Thus liquid *Laudanum*, with Tinctor of *Castor*, of Snake-weed, of *Diambra*, of Saffron *Sal Volatile*, compound Spirit of Lavender, hysteric Water, and some agreeable simple Water; some of these mix'd in a due Proportion, and proper Dose, will not only procure Rest, and ease Pain, but answer all the other Intentions in the Cure of a Fit of the *Gout*. Thus also *London Laudanum*, with old *Venice* Treacle, or *Mythridate*, serpentary Root, and unscented Species of *Diambra*, made into a *Bolus*, with any agreeable Syrup, and cautioned, as before, will produce the same Effect.

XXVII. As soon as the Pain is almost gone, and the Swelling and Weakness only remain, nothing will more quicken and finish the Cure, and strengthen the weaken'd Parts, than gentle warm, stomachic and spicy Purgers, dos'd and repeated according to the Strength of the Patient; by carrying out of the Habit, the more gross and unperspirable Remains of the *gouty* Humour. This premis'd, especially after long and severe Fits, which have impaired the Strength, and wasted the muscular
Flesh;

Flesh ; I should advise Ass's Milk with Pearl, half a Pint, or a Pint, in the Morning early, and five or six a Clock in the Afternoon ; to lengthen out the Morning Sleep, to pulp up the exhausted Muscles, to cool and refresh the parch'd *Fibres*, and keep the Body soluble ; which Ass's Milk commonly does. And to keep up the Appetite, which the Milk commonly palls, and to prevent its too cooling effects on the Stomach, a light Bitter made of Gentian, Cinnamon, and Orange Peel only, the last double of the other two, infus'd on Sherry or White-wine, and taken two Hours before Meals, may be used most conveniently. This Course might be continued for two or three Weeks: After which I should order a Course of *Bath* or *German Spaw* Waters with Steel, Riding, a light White-food Diet, and generous Wines drunk temperately.

XXVIII. It is in the Intervals of the Fits that any thing great or probable is to be undertaken for the Relief or Cure of the *gouty*. The Methods, both general and particular, I have touch'd upon. I come now to recommend some special Medicines, which have been found useful in this Case. It is certain that great Abstinence from Flesh, Fish, and Wines, would prevent the Fluids from being overloaded with *gouty* Salts. It is also certain, that if the Food be carried out before it is digested, it will be pretty near the same Thing,

Thing, as if the Quantity carry'd out, had not been taken down. Now if a Medicine can be found, that without weakening the Stomach and Bowels, shall carry off the greater part of the Food, before it is quite rob'd of its Salts, it can't fail to be of great Use in the Intervals of the *Gout*. For this purpose, I wou'd recommend fine Rhubarb, taken regularly once, twice, or oftner a Week, in such a Dose, as to procure two or three Motions: For these Reasons, *First*, Because it is an excellent Stomach Bitter, as is evident from its Taste, and from the sharp Appetite it gives those that take it frequently. *Secondly*, Because it is one of the noblest Astringents hitherto known, as is evident from its Cure of Fluxes, and intestine *Hæmorrhages*; and from the Tightness it leaves on the Bowels. *Thirdly*, Because it requires neither Diet, nor keeping warm, nor any other particular Management; and yet taken frequently and regularly, it will carry off any Proportion of the Food one pleases; and so reduce the Diet, as near as needs be, to *Carnaro's*, which in Article XIII. has been shewn, to be of so excellent Use in the *Gout*. I knew a noble Lord, of great Worth and much *Gout*, who, by taking from the Hands of a Quack, a Dram of Rhubarb, ting'd with *Cochineal* to disguise it, every Morning for the Space of six Weeks, liv'd in Health for four Years after, without any Symptom of it.

XXIX. *Schol.* That Regimen, which with proper Medicines, and due Exercise, I have found most successful of any, for the Cure of *chronical* Distempers, even the most deplorable, has been by retaining a small Proportion of Flesh (of younger Animals, and of a whitish Colour) and Wine (of the lightest, and most generous kind) and making up the rest of the Meal with *Milk Meats, Sago, Rice*, and other vegetable Foods: The whole of a moderate, but equal Quantity. By this Method, the Strength of the *concoctive Powers* have been supported, the Vigour of the *Juices* have been maintain'd, the *Mass* has been gradually altered, and the Danger of raising the Diet higher (when Health, a stronger Digestion, and a perfect recovery, have made it proper) has been prevented. For certain it is, this Method, if instituted within, or not long after the beginning of the *Decline* of Life (which from the Authority of an inspir'd *King*, and *Prophet*, I place about Thirty five) in due time with proper Remedies (the great *Organs* not being spoil'd) will bring on a Period, or Conclusion to any *chronical* Distemper whatsoever. I have endeavour'd by several Trials on myself, and others, to determine the quantity of Food that will preserve a Person of a confirm'd State of Health, near to, or already past the *Meridian* of Life, that uses no violent bodily Labour, in a due Plight, freedom of Spirits, and

and wonted Vigour, in these our *Northern* *Climates*. And I have fixed it (as near as such a various Subject can be limited) in about eight Ounces of Flesh Meat (Beef and Pork excepted, which I think ought cautiously to be used by those that live according to Rule, by Reason of the Rankness of their Juices, and their Hardness of Digestion) about twelve Ounces of Bread, or other vegetable Food, and about a Pint of old generous Wine, or Liquors of the same Strength. Those who study hard, keep the House constantly, or would cure a *chronical* Distemper, must even abate of this Quantity. I make no account of watery Liquors in this Estimate, such as *Tea*, *Coffee*, and the like. Nor do I think *Fish* a good Diet for those who are subject to *chronical* Distempers, which most are, who are near the decline of Life; for it's certain, the Bodies of all Animals, at last, partake of the Nature of their Food; but it is to be minded, that no quantity or quality of Food will long preserve any one in perfect Health, who uses not due *Exercise*, and proper Relaxations, for without these, no Food can be duly concocted.

XXX. It is worth here taking Notice, that all the Preparations of this Medicine serve only to spoil it: And that it is best taken in a spoonful of Soup, or any other agreeable Liquor, immediately before Dinner, or chew'd
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in a Morning fasting. But to those to whom its Mawkishness is nauseous, I wou'd recommend this Form. *Take Gentian and Zedoary of each a Dram, Serpentry Root, and unscented Species of Diambra, of each half a Dram; Cochineal and Saffron of each a Scruple; Orange Peel an Ounce; infuse in a Quart of Mountain, in a warm Place, twenty four Hours, strain, and to the Liquor add three Ounces of the best Rhubarb; Salt of Wormwood a Dram and an half; sat in a warm Sand, heat twelve Hours; and then strain a second time.* Of this four Spoonfuls every Night, or every other Night, as occasion requir'd, I have found an excellent Remedy in this and other chronical Cases. Where no Preparations of *Rhubarb* will agree with the Constitution, as there are many such, then *Elixir Salutis*, Tincture of *Hiera Picra*; a Solution of *Gum Gajac*, or the *Scotch Pills*, might take Place; but that all the Preparation of *Aloes* are apt to throw out both *Gout* and *Piles*. However in this matter there is great Variety; out of whichever one may fit themselves with what is most agreeable to their own Constitution; which if they use regularly and frequently, they cannot fail to prevent violent Fits of the *Gout*, and perhaps most other, both acute and chronical Distempers.

XXXI. *Schol.* I have known some eminent Physicians, that have had so little regard to
Sydenham's

Sydenham's Opinion in this Matter, that in the Fit of the *Gout* it self, at whatever time it happen'd, they never scrupled to drive it off, both from themselves and others, by strong, quick, and active *Purges*, which they repeated every Morning, whilst the *Fit* continu'd, and at Night quieted the Tumults they excited, and expell'd the *gouty* Humours, introduc'd into the Habit by them, with *cordial* and warming Medicines mix'd with *Opiates*. This Method they continu'd till the Pain was gone, and the *Tumour* subsided. And to prevent its return, carry off all the remaining *goutish* Humours, and to strengthen the Habit, they pursu'd gentle Stomach *Purges*, *Aromatick Diluters*, and warm *Alteratives*, till a strong Constitution was obtained : And most certain it is, this Method will cure any Fit of the *Gout*, how obstinate soever, and that in a few Days. The Reasons they gave for this Proceedure, was, that by such a Method, inflammatory *Rheumatisms* (of the Nature of which the *Gout* was) *Erysipela's Schirrous*, and even *hot Tumours*, were safely, quickly, and certainly (without Relapses or Danger) carry'd off; and that the Danger arising in common Practice, from purging off a *Fit* of the *Gout*, was, that Care was not taken, to prevent its returning, or its falling on some other noble Parts, by continuing these gentler, warm *Purges*, *Diluters*, *Alteratives*, and *Strengtheners*, to carry off intirely the *gouty* Remains, to

sweeten the sharp Humours, and to strengthen the *relaxed* Solids. But this I mention only to illustrate and confirm my Advice, of gentle *Stomach Purges*, in the Intervals of the *Gout*. For I am of Opinion, the most dangerous, and active Part of the *gouty* Humour, is a great deal too subtile (tho' an *Humour* certainly it must be) to be carried off by any gross evacuation whatsoever. And many *fatal* Experiences have confirmed the Danger of Tampering after such a manner (whatever Authority it may have to defend it, or specious Reasons to enforce it) to suffer any cautious Person to venture upon it.

XXXII. Next to Rhubarb, and all Circumstances considered, even far before it, I would recommend *Sulphur*, as one of the best Remedies in the Intervals of the *Gout*. It is but in little Use at present in Physick, except in the *Itch*, and the *Piles*; and yet in the whole Extent of the *Materia Medica*, I know not a more safe and more active Medicine. Its wonderful Efficacy, and particular manner, of operating in these common Cases, might, I think, have encourag'd its Trial in other chronical Cases, especially considering the Facility of its Working, and the little Trouble it gives in taking it. Its principal Qualities are these. 1. The Parts of *Sulphur*, and those of Light and Fire, act mutually upon one another, more powerfully than those of other Bodies.

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It is to their *Sulphur* that Bodies owes the reflecting and refracting Virtues; from whence its Inflammability proceeds. * The Particles of *Sulphurous* Bodies receive and retain those of Light and Fire, more strongly than any other Bodies: And the Rays of Light and Particles of Fire, seperate, move and turn the Parts of *Sulphurous* Bodies into Fire and Flame.

2. The Parts of *Sulphurous* Bodies are very small, even smaller than those of Water it self, whereby it comes to pass that they will enter those small Vessels, where Water it self (our best and most universal Diluent) can't come, this is evident from hence, that Water will not dissolve *Sulphur*, and that no Moisture will stick to fat Substances, or the Feathers of water Fowl: As also from its Cure of all cutaneous Foulness; which it cou'd never effectuate but by entering all those smallest Vessels, which scarce any other Medicine can enter. And *lastly*, by its dissolving the fizy Juices of the smallest internal *Glands*, when obstructed; particularly those of the *Lungs*, *Mesentery* and *Rectum*; as in the humorous *Asthma*, *Scrophula* and *Piles*. 3. *Sulphurous* Bodies will readily unite with, and destroy the Effects of all *Saline* Particles, but especially those of the acid kind. And in this their great Energy seems to consist. *Sulphur* yields

* Vide Sir Isaac Newton's *Treatise of Light and Colours*,
 1 Edit. in English, towards the end.

the most piercing, active, and agreeable *Acid* in the World; such as Spirit of *Sulphur*, Gas of *Sulphur*, and the like. 4. The fat and oily Parts of *Sulphur*, like other fat and unctuous Bodies, are the lightest, the most coherent, and the most springy of all Bodies. These two last Qualities are most manifest from the artificial *Sulphur* made of Oyl of Turpentine and Spirit of *Vitriol* (the strongest Glew, and the most penetrating Acid) duly digested and carefully manag'd, which in all respects is the same with natural *Sulphur*. “ No “ Body denies (says *Tournfort* in his Voyage to the *Levant*, Pag. 122. Part. I. *English* Edit.) “ that *Sulphur* is only a fat Substance, “ fix'd by an acid Spirit: The *Sulphur* which “ is artificially made, and the *Analysis* of “ common *Sulphur*, put this Truth out of all “ Dispute. For the sea Water being fat by “ the Oyl of the sea Fish continually corrupt- “ ing there, and bitter and saltish from its sa- “ line Rocks, produces in proper Nests natural “ *Sulphur*. ” And Sir *Isaac Newton* says, in his last Edition of his *Opticks*, pag. 359. “ By “ dissolving flower of Brimstone in Oyl of Tur- “ pentine, and distilling the Solution, it is “ found, that *Sulphur* is compos'd of an inflam- “ mable thick Oyle, or fat *Bitumen*, an acid “ Salt, a very thick Earth, and a little Me- “ tal: The three first were found not much “ unequal to one another, the fourth in so “ small a Quantity, as scarce to be worth the “ con-

“ considering. ” Join all these Qualities together, and you have one of the most admirable Remedies in the World, for all Intentions in the Cure of the *Gout*: By its agreeable Taste and Lightness of the Stomach, (especially when wash’d down with any milky Vehicle) its Tenacity, Ropiness and Elasticity; the Smallness of its Parts; their Efficacy in destroying the Mischief of all saline Particles, with their natural Warmth, join’d to the Activity of its acid Salt, (making it a kind of natural Soap) it enters the small Vessels, where no other Diluent, hitherto known, can come; cleanses their Insides from the Foulness that sticks to them; imbibes and retains all the *gouty* Salts and carries them out of the Body by Perspiration; softens, smooths and relaxes the parch’d and stiffen’d *Fibres*; and by leaving some of its oily Parts on their Surfaces, sheaths and defends them from the Points of the Salts afterwards introduc’d. And the Fact is, from repeated Trials I can recommend *Sulphur*, as a most powerful Remedy in the Intervals of the *Gout*. For I have known half a Dram of powder’d *Sulphur*, or Flowers of Brimstone, taken regularly twice a Day in a Spoonful of Milk, prevent the Fit for many Years: And lessen both its Pain and Duration when it happen’d: For it mov’d the Body gently once or twice a Day. I have in my Possession Testimonies under the Hands of some treated and tended by my self; and of others

others of undoubted Credit, witnessing to the great Success of this Medicine in the Intervals of the *Gout*. Nothing hitherto discover'd, I believe, equals it obstinately persisted in.

XXXIII. *Schol.* An ingenious *Gentleman* has lately recommended *Camphire*, as an admirable Remedy in the *Gout*; I heartily wish it may be found as beneficial, as he thinks it will be, both for the sake of himself, and that of others. I have try'd it to prevent *Stranguries* arising from *Blisters*, to remedy *Hæmorrhages* in the *small Pox*; in *Hysterick Fits*, and *Convulsions*: In stopping the Torrent of *white Water* in *Vapours*, and in the Fit of the *Gout*, to raise a gentle Perspiration. In all which Cases, I have found it sometimes more, and sometimes less successful, and in the last I particularly recommend it. But it is so nauseous in the Stomach, so constantly Heart-burns, in whatever Form given, is never so readily dissolv'd in any Liquor, as Spirit of Wine, whose Heat it thus so increases, that it almost becomes a *Causitic* on the Stomach: And thus given as an Alterative, would probably do more Hurt, even by its scalding Vehicle, than it could do good by its Virtues. That unless its Dose be very small, some more convenient Form of giving it be found out, or some Method be contriv'd to lessen its excessive Heat. I should be much afraid of giving it inwardly, for any long Time. As to the
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Preference he gives to it before *Sulphur*; all I can say is, that I am ready to name a great many Persons of Condition and Parts, who are now taking, or have taken *Sulphur* in the Intervals of the *Gout*, and none without Success, more, or less: According to their Age, Constitution, and Management in other Respects. I think it unjustifiable to mention their Names without their leave, and I have no just Reason to ask it, not pretending to any *Nostrum* or Secret. But having plainly discovered all that I know in the matter, so that every Body is left to his own Liberty: And when *Camphire* has been as often, and more successfully try'd, I shall most readily give it the Preference, being much less concerned for Reputation, than for being useful in Proportion to my poor Abilities. Tho' I own, I despair of finding a better Remedy in the Interval of the Fits of the *Gout*, than *Sulphur* rightly managed.

XXXIV. Especially if to these be added plentiful Dilution by some Blood-warm Infusion of a spicy and diuretick Plant in Water, so as to provoke a gentle breathing Sweat, and pass freely by Urine. Thus large Draughts of Sage, Dwarf-elder, Buck-bean, or Green-tea; but especially of weak Whey made on old Mountain, drunk Blood-warm, and on an empty Stomach, and join'd to any of the now mention'd Medicines, will be of great Advantage in the Intervals of the *Gout*; by dilu-

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ting and breaking its Salts, and carrying them off by Perspiration and Urine. And certainly *Roselli's* Drops, (perhaps the *Tinctura Metallorum* somehow alter'd) which were said to work gently by Stool and Sweat, in the Hands of a prudent and knowing Physician, had been an admirable Remedy, as answering both the Intentions mention'd, in the Intervals of the Fits ; and even in the Fits themselves, it had not been without its Use (always excepting the *vernal* and *autumnal* regular Fits) had he dealt with recent *Gouts*, and firm Constitutions only. That which I wou'd particularly recommend here, is, a weak Decoction of the *BARK* of *Sarsa* Root (in the *BARK* the Virtues of the Plants chiefly consist : For being replenish'd with most part of, if not all the Juice circulating Vessels, it contains all its Salts and most active Parts ; and being spongy and tender, it is thereby more easily digested : And where Roots are most in Use, the *BARK* of the Root is more eminently useful, for the Reasons assign'd : As also because, towards the End of the *Autumn*, when Roots are gather'd, the Cold has already driven the Juices into their *BARK*. And this may be one Reason why the famous Pox-Doctor succeeds in some Cases, when mismanag'd *mercurial* Treatments have fail'd : His Diet-Drink chiefly consists of a Decoction of the Bark of this Root : His Pill is *Mercurial*, perhaps the *Arcanum Corallinum*, or *Panacea*, and these two per-

persisted in for so long a time must necessarily sweeten the tainted Juices, and expel the entangl'd and grosser *mercurial* Parts, which clustering together, could not perform the Circulation, but were retain'd within the Habit, by former mismanag'd Salivations, and thereby rendered ineffectual to the Cure; especially, if to these be added, the low and starving Diet he prescribes, for I have heard of a famous Sea-Commander, who effectually cur'd the first Stages of *Venereal* Distempers by living twenty Days on *Water Gruel* only, in which a little *Cream of Tarter* had been first dissolv'd; and higher Degrees of the same by the like Diet continued twice the Time;) with a little Milk, drunk freely Blood-warm every Morning, which I have known wonderfully relieve *gouty* Persons, when drunk all the Winter between the *Cardinal* Fits. And even Cows Milk warm, taken for Breakfast and Supper, has been of great Service to those *gouty* Persons who drink not much Wine; for those who drink Wine freely, have too hot and sour Stomachs to deal in Milk.

XXXV. Even drinking freely of light, clear, warm Spring Water after full Meals, and indulging in strong Liquors, will be found of great Use in the intervals of the *Gout*. It is well known that warm Water alone, drunk in a Morning fasting freely, and at Meals, and its Heat, its Dilution, and cleansing Qualities,

has been a fovereign Remedy in reftoring decay'd Appetites, and ftrengthening weak Digestions, when other more pompous Medicines have failed. *Lower* very juftly obferves, that Perfons that have drunk beyond the Rules of Temperance, may be much relieved from the ill Effect of it, by expofing themfelves to the free Air, to cool the Blood, and to force off the Liquors by Urine. I'm of Opinion, were there neither Sin nor Shame in it, as there are eminently both, a *gouty* Perfon, ought to avoid Intemperance, as he would avoid the Bite of a Snake or mad Dog. But fince fuch Accidents do happen, let the *gouty* Perfon, after the Excefs either in Meat or Drink, fwallow down as much fair Water as his Stomach will bear, before he go to Bed; whereby he'll reap thefe Advantages: *First*, Either the Contents of the Stomach will be thrown upwards, and he freed from a great part of the Load. Or, *Secondly*, Both Meat and Drink will be much diluted: and the Labour and Expence of Spirits in Digestion much faved. And *Thirdly*, The *gouty* Salts will thereby be diffolv'd and diftanc'd from one another: And fo be more readily carry'd off by the free Perfpiration, Sweating and Urine, which enfue.

XXXVI. But beyond all other Things, a well order'd Courfe of *Bath* Waters, with *Chaleybeats* and warm Bitters, and a frequent and regular Ufe of Stomach Purgers will be found

found to succeed best in *gouty*, as well as other chronical Cafes. The learn'd have been divided, and much perplex'd about the Heat of *Bath Waters*. I have always endeavour'd to account to my self for it, from the common Experiment of mixing Filings of *Steel*, and Powder of *Sulphur*, working them into a Paste with Water, and putting them into a Cellar, under a Cock, dropping Water slowly and regularly; the Paste will ferment to such a Degree, that the Water running from it shall be of the same Heat and Virtue with the *Bath Waters*; tho' not so pleasant, nor so well fitted to human Bodies. This is a common Experiment, and these are the only natural Bodies known, which meeting together will produce Heat in Water, without artificial Fires. *Tournfort*, in the Place before mention'd says, "It's certain that Filings of Iron steep'd in common Water will grow considerably warm, and much more so in Sea Water: And if you mingle therewith some *Sulphur* powder'd, you'll see this Mixture really burn." Sir *Isaac Newton*, in his last Edition of his *Opticks*, Page 354. says, "That even the gross Body of *Sulphur* powder'd, and with an equal Weight of Iron Filings, and a little Water made into a Paste, acts upon the Iron; and in five or six Hours grows too hot to be touch'd, and emits a Flame." That the Heat of the *Bath Waters* is owing to a Principle within themselves, is evident, from their retain-

retaining it longer than any other Water, heated to the same Degree, will. Wherefore there can be no Necessity of having Recourse to *Vulcano's* or subterraneous Fires, to account for this Appearance. There are no burning Mountains known in this our *Northern* Climate; and tis' pretty hard to conceive, how Fires should have burn'd so long under Ground without a Vent, or any other remarkable Sign. The *Sulphur* in the *Bath* Waters is evident to the Senses, swimming in large Clusters on the Tops of the *Baths* mix'd with Earth, and some vegetable Substances, wherewith the Guides commonly gil'd Silver; and is found an excellent Remedy in *Scurvies*, *Leprosies*, *Ringworms*, and other *Foulness* of the Skin. The Steel is manifested by the blueish Tincture given to the Water from the Pump, by an Infusion of Nut-gall. It is true, this Tincture is neither so deep, nor is it to be had from the Water, in any short time after it comes hot from the Pump, thereby to manifest any great Quantity of Steel in the Composition, such as can have the full Proportion to the Experiment now mention'd. But, to set this in a clearer Light, let us put together these Considerations. *First*, That upon Distillation of *Bath* Water, there remains little in the Bottom of the Glass but the common *Calx* or Sea-salt, that is found in the Distillation of spring Water, if we except some Sand or Earth, that is forc'd up by the violence of the Pump; wherefore

fore the *Bath* Waters not being impregnated with any Quantity of a saline Mixture, can retain nothing in their own proper Substance but the lightest Parts of the Steel and *Sulphur*. *Secondly*, That this Water is as fully impregnated with *Sulphur*, as it can bear, has been already shewn: And that there must be a greater Proportion of Steel in *Bath* Water than is manifested to the Senses, or discover'd by any Experiment hitherto made, is evident from its healing Effects, which no known Medicine but Steel can bring about, or account for: None but those who have seen it, can believe the wonderful Efficacy it has, in most chronic Cases. What, but Steel, in a few Weeks, can make the Blood, from a white blueish or tallow Hue, resisting the Knife, like Glew, swimming in its *Serum*, like an Island amidst the Ocean, look all of a Piece, of a Scarlet Colour, and a due Proportion between its nourishing and its watery Parts. Nothing but Steel can make a pale ash-colour'd Countenance, hollow and deep Eyes, no Appetite, little Strength and less Sleep; eat, and drink, and sleep, look gay and sleek, like the best Health. Thousands of such Instances may be seen every Season at these healthful Springs. *Thirdly*, The Effects of *Sulphur* in bridling the sensible Appearances and Operations of most active Medicines, is very well known. Instances of which, in natural Bodies, are, *Antimony* and native *Cinnabar*; in artificial ones, *Æthiops* Mine-

Mineral, and *cinnabar* of *Antimony*: In all which the *Mercury* is so bridl'd up by the *Sulphur*, that none of their sensible Operations and Appearances are felt, while they produce the most wonderful Changes on animal Bodies. I cannot pass over *Æthiops* Mineral without pressing its more universal Use than, or ought I know, it has yet had in common Practice. It is one of the most certain and universal Alteratives, if dos'd sufficiently, and long enough persisting in, of all the *Dispensatory*. It radically extripates the Itch, the Piles, scorbutick and scrophulous Ulcers; all cutaneous Foulnesses; all inflammation and fluxions of the Eyes; all internal Ulcers, Rheumatisms, white Swellings; sharp Humours in the Stomach and Guts, and almost all Distempers arising from sify Juices. I say, it cures these, if Art can do it; for some of these (like hereditary *Gouts*) are so transubstantiated into the Solids, that nothing but a new Conformation of Parts can cure them. It may be given almost to half an Ounce a Day, especially with interpress'd *Mercurial* Purges, without Trouble, or any sensible Operation, and continu'd for a Twelve-month, if one pleases. The finest *Sulphur*, and fittest to make *Æthiops* of, is common *Sulphur* powder'd, and boil'd seven or eight times in spring Water, whereby it becomes as light on the Stomach as prepared Pearl, and as effectual in the Cases mentioned, as the celebrated *Sulphur* of *Aix la Chapelle*

pelle Waters. But to return to the Business.

XXXVII. *Schol.* I have had frequent Opportunities of trying *Æthiops Mineral* in different Cases, since the first Edition of this Treatise, and never without Success. Amongst others, I try'd it on a Person of an exceeding gross corpulent Habit, who had past the *Meridian* of Life, for a spreading, foul, *Scorbutic* Ulcer, which had affected the whole Ankle, for more than a Span length quite round, and was pretty deep in the Out-side. He took three Drams made up with the Syrup of Lemons, twice a Day for four Months successively, and a gentle *mercurial* Purge once in ten Days: This with a low, cool Diet, and proper Dressings, heal'd it up quite, when 'twas generally thought, scarce any Medicine, especially so easy an one, would ever finish such a Cure, in such a Constitution. The *Æthiops* was taken without any Disgust, Trouble, or Interruption of Business; purging gently once or twice a Day: And it was observable (and it is for the sake of this Observation chiefly, that I mention this Instance) That the very *Æthiops* it self, after the Body had been fully replenish'd with it, in two Months Time, forc'd it self through the sound Parts of the Leg and Skin, and stuck to those Parts of the Plaister, that covered them, in its proper Substance, and Colour: I very
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well know, that *scorbutic Ulcers* will throw out a *sanious* and black Stuff: But this appeared chiefly on those Parts which covered the sound Flesh, and disappear'd a few Days after the *Æthiops* was omitted to be taken. Which shews, how readily this Medicine passes through the smallest Vessels of the *Glands*; and indeed *Sulphur*, tho' taken inwardly only, is quickly smell'd in the Clothes of the Patient, and by discolouring the very Money in his Pocket. But more especially, when joined with *Mercury*. This very Method never fails to cure Ophthalmia's, even scrophulous Ones, and is a most certain Remedy in an Ulcer of the *Bladder*, as I have always found, if giv'n in a sufficient Dose, and persisted in a sufficient Time.

XXXVIII. The Sum of all then is, since the *Bath Waters* derive their Heat from a Principle within themselves; since no natural Body, but *Sulphur* and Iron can produce such a Degree of Heat, as is in them; since nothing but Steel can produce those wonderful Cures on human Bodies, which *Bath Waters* do; since *Sulphur* will lock up, and bridle the sensible Appearances and Effects of the most active Bodies, and yet not destroy their healthful and medical Virtues; it is plain, that *Bath Waters* must owe their Heat to a Mixture of steely and sulphurous Particles; and their healthful Effects, to a greater Proportion of Steel,

Steel, than is sensible, or easily discoverable by any Experiment hitherto made, join'd to a light *Sulphur*, whose Virtues and Efficacy in all chronical Cases, we have already shewn. The Mountains which surround the Place, which every Body now knows, to be but the Nests of Minerals, and the Receptacles of the Waters, which feed the Springs, (which Mountains are continued even to the Sea) confirm this Opinion. The Manner I conceive thus, The Dews drilling and dropping through the Cranies of the Mountains, fall upon a Bed of Iron Oar, and are there as fully impregnated with *Chalybeat* Particles as such Water can bear; and gently owzing down upon a Nest of *Sulphur*, and there fermenting to such a Degree, that requiring more Room, they Bubble up at the Foot of the Mountains, with their sulphurous Spoils, and furnish out this healing and balsamick Fluid. All hot Waters seem chiefly to consist of these two Principles: and to differ only as the *Sulphur* or *Steel* predominates in them. Where the *Sulphur* predominates they are hotter, more nauseous, and more purgative, Of the three hot *European* Waters of Note, the *Aix la Chapelle*, *Bourbon*, and *Bath*; the first abounds more eminently in *Sulphur*, which makes its Heat, Nauseousness, and purgative Faculty so great, that few weak Stomachs can bear its Heat and Nauseousness, and fewer weak Constitutions, the Violence

of its purging. The *Bourbon* are of a middle Nature, between the *Aix la Chapelle* and the *Bath* Waters; and are less hot, nauseous and purgative than the *Aix la Chapelle*, but more than the *Bath* Waters. The *Bath* partake less of the *Sulphur* and more of the *Steel* than either of these two; and are by far the most pleasant; of a milky Taste, never purge, except they be drunk either too fast, or in too great Quantities, and always mend the Appetite, and raise the Spirits. The weakest hot Waters are but of little Use, except in the lowest Cases, and hestick or consumptive Constitutions; but for medical Uses, the weaker hot Waters may be made pretty near equal to the stronger by Evaporation, as to the sulphurous Principle; as the stronger may be brought down to the weaker by Dilution, as I have experienc'd; tho' Nature be always the wisest and most perfect Operator. But neither the same Proportion of *Steel*, nor *Sulphur*, nor Heat, indifferently fit all Constitutions. Generally the Strenght (*i. e.* the Quantity of *Steel* and *Sulphur*) of the same hot Waters is in Proportion to their Heat; and therefore to fit the same Waters to weaker Constitutions, they need only be drunk proportionably cooler.

XXXIX. The *Bath* Waters having such an Origine, and such Qualities, must needs be an excellent Remedy in the *Gout*, and other chroni-

chronical Cafes, for these Reasons; 1. Because of their Warmth, just suited to the Wants of Nature, and a little above the Heat of human Bodies, sufficient to introduce a foreign Warmth and Motion to cold and decay'd Bowels and Fluids; whereby the natural Warmth and slow Circulation is increas'd and enliven'd. 2. This, with its agreeable Taste and milky Softness, makes it sit so easily on the Stomach, and become so excellent a Vehicle, to wash into the Blood, other proper and specifick Medicines, without that Nauseousness and Fret on the Spirits, which all other hot Waters, hitherto known; or that Chillyness and Damp, which all cold Mineral Waters give; whereby they are render'd useless or hurtful in some low and nervous Cafes. To these add, 3. Their *Chalybeat* Principle, so peculiarly lock'd up in *Sulphur*, that the Patient reaps all the Benefit and healthful Effects of the best Preparations of this Medicine (and what are not two such powerful Medicines combin'd, able to effect?) without the nauseous Taste, and frequent Disorders upon the Stomach, that every other way of giving *Steel* produces. 4. The *Sulphur* united with the *Steel*, makes it a natural kind of Soap, for cleansing the Insides of the Vessels from the Foulness that cleaves to them; and for opening the Obstructions of the small Vessels. But 5. That which, together with the others, makes it specifick in the *Gout*, is, its relaxing

Quality,

Quality, whereby it softens and supples the rigid and stiff *Fibres*, so as the *gouty* Humours may pass freely by Perspiration. Much more might be said of this wonderful Remedy provided by the Hand of Nature, to relieve the Miseries of human Life; but this the innumerable Crouds of Cripples of all sorts, and those other Persons made miserable by chronical Distempers, sent thence, every Year, cur'd, or reliev'd, do witness, more convincingly, than either Philosophy or Rhetorick can.

XL. I will here remove two Difficulties : The *First* is, concerning Bathing in the Intervals of the *Gout*. The only Reason given for this Difficulty is, lest the *gouty* Humour shou'd be driven inwards upon the Bowels. But this seems to me a mere groundless Jealousy : For in regular *Gouts*, when the Fit is over, it is to be suppos'd, that the *gouty* Fluid or Matter is mostly or altogether spent, and the Fluid in a healthy sound Condition. And therefore it might be as reasonably doubted, if in the Intervals of two putrid Fevers (of which many have had more than two in their Life-time) a Person might safely bath. There is no Question, but that a *gouty* Person may both as safely bath, and take any Medicine, for any incident Disease, as any other Person; regard being had to his particular Constitution. And 'tis Matter of Fact, that those who have been crippl'd by the fixing of the *gouty* Salts
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upon the Joints, or disabl'd by the Tender-
ness of the Parts, have been extremely relie-
v'd by a long Course of Drinking and Bathing
in these hot Waters, which by relaxing the
Fibres, dissolving the sily Humours, diluting
the *gouty* Salts, and making them pass by
Perspiration, have restor'd them to the Use
of their Limbs.

XLI. *Schol.* It is capable of Demonstration,
that the *Force, Pressure, and Weight* of the
Bath-waters in Bathing, is sufficient to coun-
ter-act the Force of the *Perspiration* some
Millions of Times; and consequently, that
these Waters *relaxing* the *Fibres* of all the
Vessels, and soaking thro' the *Scarf-skin*, and
even thro' the Coats of the small Vessels, are
introduc'd into the smallest *Glands*, and con-
vey'd by the returning Veins into the Mass of
the Blood, and by the Force of the Circula-
tion, assist in opening the Obstructions thro'
the whole Habit; and this accounts for the
wonderful Efficacy of *Bathing in white Swel-
lings, Palsies, scorbutic Drinesses* of the Skin,
*scrophulous Sores, and Tumors, nervous wa-
stings* of the Limbs, *sciatical Pains* of the
Joints, cold *Rheumatisms*, and Weaknesses af-
ter the *Gout*. And this will still be more evi-
dent, if the Doctrine of the *Attraction* of *ani-
mal* Bodies on the incumbent Atmosphere
lately so much improved by Dr. *James Keil*,
be supposed true. It is many Years since I
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was informed by a *Gentleman* of great Ingenuity, that having a good deal of Money on a Horse, which was to run for the Plate at *New-market*, and the *Rider* dying not many Days before the time appointed for the Course; he had undertaken to ride himself, and was obliged by Fasting, Watching, and Exercise, to bring down his Body to Horseman's weight; That after the Match was over, and he exactly weighed at the Post, he had rode immediately home, and having drunk up a pint of Chicken-broath only, which might weigh about a pound, got to Bed, and slept twelve Hours, and weighing again under the same Circumstances as before, found he had got in the whole about three pounds, if I remember right: Whereby he concluded, That his exhausted Body had drawn in about two pounds of the circumambient Air. This more manifestly shews, how the *Bath* Waters being hot, and consequently more active, may be drawn in, and get thro' the Pores of the Skin into the Blood-vessels, and there concur with what is drunk down towards those kindly Effects, *Bathing* commonly produces. And 'tis impossible to account for those copious, and profuse Sweats, Persons (if they lie long in Bed after *Bathing*) run into, but that their Bodies are fill'd with these Waters, like a soaked Sponge. But the weak, and low spirited, are never to be suffered to run into those: Which are prevented, by either not
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going into, or by being only a short Time in Bed.

XLII. It is somewhat uncommon, that *Bathing* which for many hundred Years wrought such Cures, as we have on Record, and singly maintain'd so long the Credit and Reputation of *Bath*; should for this last Century (in which only *drinking* the Waters have been in use) have fall'n into such Disgrace, that it is very far from being now the chief Thing People come to *Bath* for. Before *drinking* the *Bath Water* came to be so much us'd, fix'd or wandering *Pains*, Stiffness, or Contractions on the *Tendons*, *Lameness*, or *wasted* Limbs, *Palsies*, or *Rheumatisms*, were the chief Distempers People came to *Bath* for. But now since, all other *chronical* Distempers whatsoever, are relieved either by *bathing* or *drinking* : If People will *bath* indifferently, without Advice, without duly preparing their Bodies, and cleansing the alimentary Passages, without any distinct Knowledge of their Case, their Strength, the proper Season of *bathing*, or the Time they ought to stay in at once; there must necessarily happen (as there have happen'd) unlucky Accidents, which tend to discourage, and disgrace *bathing* in general. On the other Hand, if *those* who attend on *bathing* will undertake more than they can manage, or duly tend at one Time; some must necessarily be kept in longer than
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their Strength will suffer, or their Case requires. These have been the Sources of the late neglect, and contempt of *Bathing*. But I am well satisfy'd, was *Bathing* managed prudently and discreetly ; there are but few *chronical* Cases, in which it might not be useful, and in which it might not contribute with *Drinking*, and other proper Remedies, towards a *Cure*, or a Relief. If on the one Side, we do but consider of what Use, and Reputation *Hot-bathing* was amongst the ancient *Romans*, and to what extravagant Expences they run to make their *Baths* convenient, or beautiful : If we consider, that most *chronical* Distempers are attended with want of due *Perspiration*, and are therefore generally of the cold and *phlegmatic* Kind, and are always produced by *Obstructions* from fizy Juices : On the other Hand, if we reflect on what was hinted above, that the hot Water in *bathing* was suck'd in, and attracted thro' the Skin, into the returning *Veins*, and was thereby put in a Capacity, to assist with what is drunk down, to wash off *Obstructions* of the small Vessels, to thin, and dilute the Blood, and *glandular* Juices, to warm, enliven, actuate and nourish the wasted, and decay'd Parts : We shall readily conclude, that *bathing* prudently managed, may be extremely beneficial in most *chronical* Distempers. That *bathing* therefore may be performed in the best Manner possible, we must first distinguish

guish those Distempers which might suffer by it, from those which will be benefited by it. And those are chiefly of three Kinds ; (1.) Those Distempers which impair the *rational* Faculties, or affect the *Head* with Pain, or Giddiness. Because *Hot-bathing* might send Fumes, or Vapours upwards, and so increase these Distempers, such are *hysteric* Disorders, *Convulsions*, *Epilepsies*, &c. While the Fit lasts, a *Vertigo*, or Head-ach from a foul Stomach, &c. (2.) Those which any ways affect the Lungs. Because *Hot-bathing*, increasing the *velocity* of the Blood, may occasion a *Pleurisy*, or *Peripneumonia*, or a spitting of Blood in such Cases. (3.) Those which are attended with *Inflammations*, moveable *Tumors*, or with sitting *Pains*, such as the *Gout*, or an inflammatory *Rheumatism* ; because *Hot-bathing* may increase the first, or *translate* the latter. These excepted, I know no *chronical* Case (but when in their last Extremities) which might not be benefited by moderate, and discreet *Bathing*, which might scour the foul *Tubes*, open the *obstructed* Ones, increase the natural Heat, and encourage a due *Perspiration*. I shall conclude with subjoining a general Rule, whereby to know if on Trial *Bathing* agrees, and has not been continued too long in the whole, or each single Time, *viz.* If it neither sink the Spirits, waste the Strength, nor weaken the Appetite, then it is certainly beneficial ; for *Hot-bathing*

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being of the Class of *Evacuations*, if it carry nothing off, but faulty Humours, it can produce none of the mention'd Effects ; and if it evacuates these, it must needs be beneficial ; and on the contrary, if it spends the nourishing Juices, and carry off more than the Party can well spare, it must be hurtful.

XLIII. It is observable from *Guidot's* Experiments on *Bath-waters*, That the Water either exposed to the common and open Air, or cork'd up and seal'd in a Bottle, did for a much longer Time retain its Virtue of *tincturing* a purplish Blue with *Nut-gall* in *clear frosty* Weather, than in *heavy moist* Weather, *i. e.* It retain'd its *chalybeat* Principle, much longer in *Frost*, and clear Weather, than in *warm* and *moist* Weather: The Truth is, no Body could have been long at *Bath*, but must have observed, that the Waters succeeded better, quickned the Appetite more, made the Digestions stronger, and rais'd the Spirits higher, in a clear, quick, dry Season, than in *moist, warm, heavy* Weather ; and in Fact, in such a Season as this first is, they surpass all the Methods of producing such an Effect I have ever seen. To which two Causes concur, the greater Quantity of a subtil, active, *chalybeat* Principle preserved in the Water, and the greater *Tightness*, and Firmness produced in

* *Vide Guidot's Experiments on Bath-Waters.*

the Fibres by the *cold, clean, dry* Weather: But what I would chiefly observe from the mentioned Experiments, is, that the *chalybeat* Principle is so *fine, subtil, and active*, that in a few Hours, nay Minutes, it will evaporate thro' a Cork, and seal'd Glass-Bottle, and may be *retain'd* by the meer Action of the circumbient Air, its *Nitre*, and different Gravity, for some considerable Time: Which shews, how this so subtil and volatile a *chalybeat* Medicine, may be convey'd from the Stomach, even to the great and complicated Distance of the most minute Nerve, the most readily, and quickly: Which the elementary Water thus actuated, reaches much sooner, than any artificial Preparation of *Steel* possibly can. And thereby becomes so admirable a Medicine in relax'd *Nerves*, and *nervous* Distempers, to which the *Bath Waters*, actuated by this subtil penetrating and powerful *chalybeat* Principle, concur inwardly in *drinking* them, and outwardly in *bathing*, by their being drawn in thro' the Skin, into the small Vessels, as may be seen in the preceeding Articles, about *Bathing*: As to the small Quantity of *Steel* thus introduced, it seems generally sufficient for the real wants of Nature, but in *chronicle* Diseases, may be easily supply'd by larger Doses of artificial *Steel*, when the other has prepar'd the way. And certainly in giving both Steel and Bitters, it's safest, and most prudent to begin low, and
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with smaller Doses, and to rise, as the Pulse and Strength rises, And as Usage has made smaller Doses less effectual; I remember to have observed in some of the great, and sagacious Dr. *Ratcliff's Bills*, four or five Drops of *Mynsicht's Tincture of Steel*, with a few Drops of *Elixir Proprietatis* in a simple Water, prescrib'd as a *Chalybeat Bitter*, even to grown Persons. This I freely own, in the *Novitiat* of my Observations, I thought very simple. I have had good Reason to condemn my rash Judgment since, and to acknowledge it prudent, and judicious, to begin in some low Cases with such small Doses.

XLIV. The other Difficulty is, how the same hot Water shou'd relax contracted *Fibres*, as in the *Gout* and *Rheumatism*; and yet contract and brace relax'd *Fibres*, as in the Palsy and wasted Limbs. That the Matter of Fact is so, is past all doubt in these and many other Cases of Contraction and Relaxation. But to clear up this, we need only to consider what Contraction and Relaxation are. Since all the Fluids of the Body are contain'd in Vessels, Contraction can arise from nothing but from the Blood and other Fluids (or whatever is the Cause of muscular Motion) their being retain'd and obstructed by their Siziness; or from some external Injury, in the Substance of the Muscle it self; whereby it becomes fuller and firmer, and so acts as upon its Office
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of Contraction. Relaxion, upon the other Hand, is an Obstruction of the Nerves or Vessels of the Fluids, before they arrive at the Muscles; as is seen in Palsies, and the nervous *Atrophy* of the Limbs; so that in both Cases, Obstructions are the Cause both of Contraction and Relaxation. Wherefore, whatever Medicine can dissolve the Siziness of the Fluids; open the Obstructions of the small Vessels, make the Perspiration full and free, and brace the *Fibre*; will both contract Relaxations, and relax Contractions: And that these are some of the Effects of *Bath Waters*, has, I think, been made sufficiently appear.

XLV. If it be enquir'd into, what other Cases, besides the *Gout*, *Bath Waters* may be useful in; the Answer will be obvious from the Account now laid down; to wit, That they must be beneficial in all Cases, where *Steel* or *Sulphur* is; that is, in almost all chronic Cases whatsoever. In acute and inflammatory Cases, in all Cases attended with a strong, quick Pulse, no *mineral-Water*, nor *chalybeat* Medicine can be proper. But in all other Cases (excepting those only attended with a Bleeding or *Hæmorrhage*) they are not only safe, but exceedingly beneficial. More particularly, their wonderful Efficacy has been often experienc'd in *Cachexies*, *Scurvies*; in the *Stone*, *Rheumatism* and *Jaundice*; in *hypocondriacal* and *hysterical* Affections;
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in *Vapours* and *Melancholy*; in *Palsies*, *Epilepsies*, and other *cephalic* and *nervous* Distempers; in Disorders of the *Stomach* and *Bowels*; Obstructions of the *Liver* and *Gall-bladder*; in *green* and *breeding* Sickness; in *Barrenness* and *Weakness* after Child-birth; in Obstructions of the *monthly* Purgations; and all other peculiar Diseases of the *Sex*. And truly, if a Person afflicted with a low, broken or tender Constitution, suffering under the tedious Pains and Inquietudes of any of the lingering Distempers now mention'd, where the *Viscera* or Bowels are yet sound, wou'd know the fittest Place in *Britain* to spend their Life-time with the greatest Ease and Pleasure; take all the Advantages of the Place together, the Agreeableness of the Waters to the Stomach; the Certainty of their procuring a good Appetite, when it fails; and the no less certain Consequence thereupon, Freedom and Chearfulness of Spirits; the regular Way of Living; the Excellency of the Provisions; the Warmness, Cleanness and Neatness of the Housing; the Conveniency of the free, fresh and open Air of the neighbouring Downs for Exercise; the Easiness of the Amusements; and the Advantage of what Conversation one desires; I say, taking all these Advantages together, I can affirm from near twenty Years Experience, without Suspicion of Flattery, or Fear of Contradiction, that *Bath* is the Place.

XLVI. Some wise and frugal People think the mere drinking of these Waters, for some Time, without taking any Medicine, either before or with them, may be sufficient to remove any of the chronical Ails they are good for; but those, if they are really ill, in any other manner, except mere Loss of Appetite, are generally convinc'd, upon Trial, at their own Expence, that they neither ought to begin a Course of the *Bath Waters*, without a previous cleansing of the Stomach and Bowels, lest they wash into the Blood through the *Leeteals*, by the perpetual Dilution of the *Bath Waters*, those Impurities, which constantly cleave to them; not that they ought to expect a perfect Cure of a long-breeding and lingering Distemper, without the Assistance of those other Medicines which are reckon'd Specifick in the Case; and to which the *Bath Waters* are so pleasant and so assistent a Vehicle: For it is but Prudence to bring all the Forces one can raise against so potent and so formidable an Enemy as a chronicle Distemper.

XLVII. It is not possible to lay down a general Rule, about the Quantity of *Bath Waters*, which it is convenient to drink daily; that being to be varied according to some Circumstances of the Patient, and the Nature of the Distemper: Strong, full and large Bo-

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dies bear more Waters than tender, thin and lesser ones ; the younger more than the elder ; those of strong and firm, than those of weak and relax'd *Nerves* ; those who labour under the *Gravel* and *Rheumatism*, than those who are disorder'd in the *ailmentary* Passages, or are subjected to *scorbutic* or *nervous* Weaknesses, and the like. But in general, it were to be wish'd, that *People* who come to *Bath* for their Healths, drunk less daily than they commonly do ; and allow'd more Time for a chronic Distemper. I think it may be safely advanc'd. That any Quantity greater than an *English Quart*, in a Morning, drunk in two Hours Time, half a Pint every half Hour, is more than what is reasonable. For, drinking in this Proportion, all the rest of the Day, at Meals, *to wit*, in the Afternoon, and going to Bed, they must take down no less than five Pounds in about sixteen Hours ; *viz.* two Pounds in the Morning, a Pint and an half with Wine at Dinner, half a Pound in the Afternoon, and as much at Supper, and at going to Bed. This every Body must see is fully sufficient to answer all the Intentions of drinking *mineral* Waters. A greater Quantity than this will serve only to distend and *relax* the *ailmentary* Passages ; to force its way through the largest, and most potent *Tubes* ; and to propagate the Circulation through the Branches and *Inosculation*s of the larger Arteries and Veins, where the least Foul-

Foulness and fewest Obstructions can happen : So that it will scarce ever reach the finest capillary Vessels, in which alone the Danger lies. And the late *ingenuous* and *learned* Dr. *James Keill* * has made it evident, that the most expeditious Way of altering the whole Mass of the Blood, by *mineral* Waters, is, by small and frequent Draughts. In most Cases a *Pint* in a Morning is sufficient, and in low Constitutions and Disorders in the alimentary Passages, tending to vomiting and purging, *half a Pint* is enough; and whatever Quantity is to be drunk, 'tis always best to take it in small Quantities, and at good Distances, provided it come within the Compass of the Morning. What is drunk at Meals, tho' cold, yet being fresh, and not altogether drain'd of its Principles and Virtues, contributes near as much to the Cure, as that which is taken in the Morning. The Afternoon and Evening's Draughts are more *arbitrary*, and must depend upon the Observation of the Patient, as he finds them agreeable to his Stomach, and sit easily or not: Where too great Quantities have not been swallowed down in a Morning, they are very proper, provided they be in Proportion to the Morning's Quantity, and never taken under four or five Hours after Dinner; and that at Night, not under

* Pag. 39. *Tentam. Medici. Physic. Jac. Keill.*

two or three Hours after Supper; these Times being the most proper to assist the Digestion, and carry off the Remains of the Food. But the truth is, as nothing is more necessary, in a Course of these Waters, than setting out right at first; so nothing requires more the Experience and Judgment of a Physician, than the accomodating the previous Preparations, the Quantities to be drunk, and the Medicines to be taken with them, to the Distemper, and the Constitution of the Patient. For these once settled, the rest generally goes on successfully.

XLVIII. It is equally impossible to determine the most proper *Season* for drinking *Bath* Waters, as it is to determine the most probable *Season* for falling ill of a *chronical* Distemper, generally speaking, most chronical Diseases enrage *Spring* and *Fall*: And Custom has made these Months, *Seasons* for the *Bath*: But the Waters are ever the same, no real Alteration having ever been observed in them from Times, or *Seasons*, tho' there may be some little Variation of their sensible Qualities, from the Variation of the *Air*, and *Weather*. In the hottest Weather, they are giv'n off for a *Month* sometime, by those that have drunk them a long Time before. But a great many, especially those of the tenderer Sort, and of cold Constitutions, feel the best Effects from them in that very Month. And with some they are best in the coldest
Weather ;

Weather ; supplying then the Inclemency of the Air, by their kindly Warmth, and passing best, when the *Fibres* are wound up, and shorten'd by the outward Cold, whereby the Circulation becomes brisker, and stronger. So that Custom and Conveniency arising from outward Circumstances, have made *Seasons* for the *Bath*, more than the Nature of the Waters themselves, or their Fitness to produce their benign Effects. The Length of Time People ought to drink the Waters, is as little to be determin'd, as the most proper *Season*, or as the Duration of a *chronical* Distemper. If they are of the Nature of an Alterative Medicine, (as they most certainly are) they are to be continued till they either disagree, or the *chronical* Distemper ceases. And this last generally requires a Time in Proportion to the inveteracy and obstinacy of the Disease, *hereditary* Sharpenesses require more Time than *acquir'd* ones: Slighter Degrees of the same Case, less than more inveterate ones ; *nervous* Distempers more than those confin'd to the Blood. A Lady of a low *Hysteric*, and weak Constitution, having ask'd the Famous Dr. Sydenham (as she told me) how long she might safely take Steel ; his Answer was, that she might safely take it for thirty Years, and then begin again, if she continued ill. The Question might be as proper, if it had been ask'd, how long Time one might continue to eat, and drink : For in Lowness, and Disorder,

Disorder, if Remedies be necessary, Nature will as safely admit them, as *Hunger* will safely admit of *Food*. I very well know, that Remedies in *chronical* Distempers must be chang'd, when they become *familiar*, and have no Effect: As the same kind of Food ought to be changed, when it becomes nauseous, and disgustful. But then this belongs not to the Question proposed, which supposes the Waters have not abated of their first Benefit and Relief, but rather increase in them, and do better. And on this Supposition, there can be no doubt, that they may be safely continued till a perfect Cure is obtained, or they fail in their Relief. Some have drunk them several Years with Advantage, and many cannot live, and be well without them: As is evident from the constant *Residing* of several Families here for their Use. Whilst the original Disorder lasts in any Degree, and the Waters continue to relieve it, they may be used; but in all Cases, and Events, it is safest, and best to let Well alone.

XLIX. It has been alledg'd, that the *Bath* Waters drunk too long, disposes People to Fevers, and *inflammatory* Distempers, by over enriching, heating, and exalting the Blood. But this Objection lies equally against all *generous* Foods, and enlivening Medicines. And indeed Temperance, and Moderation in every Thing necessary for the Support of Life, is
best,

best, and safest : And as I just now said, it is best always to let *Well* alone, but as long as a *chronical* Distemper is yet unconquer'd, and unremedied, there can be no hazard of over enriching the Blood, the very Case supposing the quite contrary, *viz.* are remaining *Siziness* and *Sharpness* in the Blood, and Juices. So that while the original Distemper continues, this Effect is not to be fear'd : And when it is conquer'd, the Patient is very indiscreet, that out of meer *Wantonness*, would play with any Medicine whatever. But this is the Case of a very few, and if ever I have met with any such, I have always religiously advis'd them to abstain from Waters, and every Thing else, that can be call'd *Medical*; for this Reason, amongst many others, that it made a very useful Remedy become less effectual, when wanted, by being made more *familiar*. But the truth is, most of the *chronical* Distempers, for the Cure of which, *Bath Waters* are recommended, are of the colder Kind, where the Blood is sily, poor, and dispirited : And whilst any Remains of the Distemper lasts, *over-enriching*, or *exalting*, it is little to be fear'd : and when they happen, are easily remedied by *Bleeding*, *low Diet*, and a few *cooling Purges*.

L. I come now, in the last Place, to make a few Observations upon irregular *Gouts*. When the original Constitution is broken and
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impair'd ; the Parts subdu'd and full of *gouty* Salts ; the Force of the Circulation, by Age and frequent Fits, weaken'd, and continu'd only through the Inosculation of the great Vessels ; the Humour recoils inwardly upon the Bowels : And this is call'd an *irregular Gout*. While it is in any Joint, or any *muscular* Part, it is still esteem'd *regular*, tho' the nearer it comes to those outward Parts, the least remote from the Heart and Bowels, the nearer it comes to an *irregular* One, and so consequently to its last and fatal Stages. To which it seldom comes unattended ; for it generally brings the Stone along with it : Of which it mayn't be amiss to make this one Observation, to wit.

LI. That the Chalk-stones voided from the Joints of *gouty* Persons, and the Gravel Stones found in the Bladders of such as were afflicted with this Distemper (perhaps the Stones found sometimes in the Gall-bladder ; but of this I can affirm nothing) are, to all their essential Qualities, the same. They have both the same Colour, Taste and Smell ; they yield both the same Principles, and produce the same Appearance, when treated chymically. They have both the same internal Texture of Parts, as far as can be known, and even the same outward Shape, when unbroken and unconfin'd by hard Substances ; and they generally happen to one and the same Person :

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At least it seldom comes to pass, that any one is much troubled with the *Gout*, but he has the *Stone*, at last. And this shews that they are both owing to the same Conformation of Parts, and other general Causes. It is true, some have suffer'd violently by the *Stone*, who never had the *Gout*; but this may be owing to a special, hereditary Narrowness and Stiffness of the Urinary Passages, in respect of the other Vessels; and a particuliar unhappy Texture of Parts, as it happens to some other Organs in other Persons: For fat People have smaller Vessels in Proportion to their Stature, than lean. But in the general, it is pretty constant, that those who suffer long under severe Fits of the *Gout*, seldom escape the *Stone*. Dr. *Cyprianus*, the late ingenious Cutter for the *Stone*, had observ'd, that those who only drunk Malt Liquor were seldom ever violently afflicted with that Distemper: And among many hundred he had cut, he had never found one, who had only drunk Ale or Beer. Whether this was owing to the lesser Quantity of Salts in those Liquors than in Wine, or to the Slipperiness they induce upon the Bowels and other Vessels, or to both, I will not here take upon me to determine. But I believe the Fact is, both in the *Stone* and acquired *Gouts*, that those who only drink Malt Liquors, without Wine or Spirits, are seldom violently afflicted with either. And for the same Reasons it comes

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to pass, that the *Gouts* and *Gravel* of the Sex, are seldom so severe as in Men; they generally drinking less Wine, and feeding less of Fish and Flesh Meats. And that in the *Gouts*, both of Men and Women, who drink no Wine nor Spirits, any little proper Medicine has intirely kept off the Pain, and prevented the Fits. I know an ancient Gentleman formerly treated pretty roughly by the *Gout*, who drinking only Malt Liquors, has, for several Years, with certain Success, entirely kept off the Pains and Fits of the *Gout*, by taking only every Morning, regularly, a Pint of warm white Wine Whey, to encourage Perspiration: Which when he neglects to do, they certainly return. We may conclude,

1. That since the *Gout* and *Gravel* Stones are, as to their essential Qualities, much the same; and since 'tis hardly possible to account for the breeding of the *Stone*, but from a particular Narrowness and Stiffness of the Urinary Vessels, and an abundance of such Salts in the Fluids; it is highly probable that the *Gout* must proceed from the same general Causes: And this is some kind of Confirmation of the two first Propositions laid down in the Beginning of this Discourse.
2. The same Method and Medicines that have been deduced from the first two Propositions, for relieving *gouty* Persons, in the Intervals of the Fits, will likewise serve for preventing the Increase of the *Stone* and *Gravel*; as we
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are certain they do from the best Experience and Practice in this Case. I will now go on with my Purpose, and consider an irregular, *Gout*, fix'd on these three great Instruments of human Life, the *Head*, the *Stomach*, and *Guts*.

LII. When the *Gout* has seiz'd on the Head, it is to be treated as any other violent Head-ach, or as an Inflammation on the Brain, or its Membranes; by bleeding at the Arm or *Jugular*; Cupping on the Back: Blistering between the Shoulders, but especially on the Ancles, to give the *gouty* Humour a Vent downwards. In young and strong Constitutions, *mercurial* and *antimonial* Vomits will do Wonders, tho' they are seldom to be ventur'd upon in any Constitution above Forty. The Intention here to be had in View (as in all other irregular *Gouts*) is to expel the *gouty* Humour outwardly upon the Muscles or Joynts, and to fix it there. Wherefore in order to carry it to as great a Distance from the noble Organs as may be, a free Passage is to be open'd to it on the Limbs, by blistering the Ancles and Wrists; and to promote its Conveyance thither, gentle stomach Purgers are to be pour'd down continually, two or three Spoonfuls every third Hour, till the Effect is obtain'd. And for this end, I recommend principally Tincture of *Hiera Picra*, with compound Spirit of *Lavender*, and a few Drops of Tincture of *Snakeweed*, and Tincture of

Diambra, as being one of the most powerful Expellents, and an excellent Strengthenner of the Stomach and Bowels. Its common Mischief is little to be minded here, for the forcing Blood or the Piles will carry the *gouty* Humour along with it; and these Disorders are but Trifles in respect of an irregular *Gout*. This Method will either spend the *gouty* Humour, or turn it to a regular Fit. But here Care is to be taken that the Medicines be not too hot, especially in young sanguine Complexions, lest an Inflammation on the Brain, or its Membranes, should turn to a Phrenzy or Fever: But there is less Danger of this, because the *Gout* in the Head seldom happens to the younger, except through much and long Intemperance.

LIII. The *Gout* in the Stomach is a common and less dangerous Case; for the *Gout* seldom comes on and goes off without touching there by the way. In the slight Touches of it, any little stomach Purge will set it a packing. But it is more obstinate towards the Decline of Life; when it settles in a constant Pain, nauseating and kecking in the Stomach. Vomits are reckoned dangerous in the *Gout*, lest they should derive the Humour on the Stomach: But there can be room for no such a Suspicion here. Wherefore upon the first Seizure of the Stomach, a Vomit is instantly to be administered, and repeated according to the occasion
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of the Case: After that *Hiera Picra*, as is before caution'd and qualify'd, with a hot *Sinapism*, or Blister on the Ancles: And last of all, the highest Cordials, and most generous Wines, may be freely indulg'd, without fear of Inflammation. Among the Cordials, I would recommend the *Electuarium de Ovo*, as containing *Camphir* (the most constant and active *Diaphoretic*, and the most useful one for that Purpose) and some other of the richest Cordials. After all this Management, should the *Gout* still continue in the Stomach, and become habitual (which it seldom does after such a Method taken in Time) nothing but a long Course of the *Bath Waters*, with *Steel*, Bitters, and gentle Stomach Purgers, a regular Diet, and proper Exercise, can effectually cure it.

LIV. Some Persons, ignorant in the Practice of Physick, have made a Difficulty about the Fitness of *Vomits*; when the Disorder is come to perpetual *Reachings*, after Cordials, and Stomach Purges have been try'd in vain. But the weakness of such Prejudices, may be shewn to the Evidence of a *Demonstration*: For when there is a perpetual Reaching and Vomiting, that neither Food nor Physick will stay: After a previous Bleeding to relax the Solids, lest straining should burst the small Vessels, a gentle *Vomit*, such as the *Indian Root* is, is not only *proper*, but even absolutely

lutely *necessary*. *Proper*, because *Vomits* do, the most effectually of any Thing, throw every Disorder out of the Habit, and so are the most probable means to expel the *Gout* on the Extremities, as they do most powerfully promote the Eruptions of the *small Pox*, *Measles*, miliary Blisters, and other acute Distempers of the Skin: (And here I am obliged by many Ties, to do Justice to that very worthy and skilful Gentleman, Sir *David Hamilton*, *Physician*, lately deceas'd, who in our conjunct Attendance on a *Person of Quality* in this last Distemper, did to my great Satisfaction, so readily foretel every succeeding *Change*, and so aptly furnish out a Remedy for every *Accident*, as did abundantly shew it *Familiar* to him, and justify the *History* and *Method* of *Cure* publish'd by him, of this tedious, and dangerous *Disease*, the *miliary Fever*. A Disease, tho' less common, yet as *various*, and as *nice*, and much more tedious than the *small Pox* it self.) And as they equally facilitate the *Birth*, and the *Stone*; in all which Cases, if Nature does not the Work promptly, Art is obliged to supply it with this Remedy. *Necessary*, because when the common Means have fail'd, as is suppos'd, there remains only to cleanse the Stomach from the sharp Humours, which in all such Cases adhere to it, by provoking it unto these *Convulsions*; and to dispose it to receive, or retain either Food, or the other Means, for the recovery of the

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Patient. Besides, since it is suppos'd, the *Gout* has already seiz'd the Stomach, cleansing it by a *Vomit* can never fix it more there ; since it is likewise suppos'd, the *Gout* is no where else at that Time : And that all the Humours are then lodg'd in the Center of the Body. But as it doth in all other Cases, and most certainly in the transient Fits of the *Gout* in the Stomach, it is then the most likely Means to promote the *Gout* on the Extremities. *Lastly*, I know no Rule a Physician has to direct him in such Cases, but following the Indications of Nature, and in what Case soever perpetual *Vomitings* and *Reachings* happen. If Circumstances do not forbid it, Nature points out as clearly its Relief from a gentle Vomit, as it does *Rhubard* in a *Diarrhæa*, The general Prejudices against *Vomiting* arise from an Ignorance of its *Mechanism*, and the Way 'tis performed. I will here set down in *English*, *Tournfort's* own Words, as he gives the Account of it, in the *Preface to his excellent Piece, of the Plants that grow about Paris*. Mr. *Chirac* (says he) demonstrates, in a manner obvious to our Senses, the *Action* of the *Stomach*, and of the *Organs* imploy'd in *Vomiting*. " Having made
 " a small *Wound* along the *Rib* that lies over
 " against the Navel of a Dog, who had swallow'd some corrosive *Sublimate*, and was
 " making most vehement Endeavours to *Vomit* ; he slit in his Hand thro' the *Aper-*
 " *ture*,

“ *ture*, and took hold of the *Stomach*, and
 “ there he found, that the *Stomach* it self felt
 “ no manner of Force, or Violence: But that
 “ the *Diaphragm*, and the *Muscles* of the
 “ lower *Belly*, contracting themselves both
 “ at the same Time in an Instant: With incre-
 “ dible Force, squeez’d the Hand that held
 “ the *Stomach*.” From this Account, it is
 evident, the *Stomach* it self suffers no more
 violence in *Vomiting*, than a Vessel doth, that
 is cleans’d by pouring Water into it, and then
 pouring it out again; for the whole Stress of
 the *Vomit* lies on the *Diaphragm*, and the
 Muscles of the *lower Belly*: *Organs* strong in
 themselves, seldom or ever subject to any Dis-
 orders, and if at all imploy’d in Digestion, at
 least in so gentle and uniform a Manner, as
 can never be suspected of wearing them out.
 The *Ancients* were so possessed in favour of
Vomiting, that *Hippocrates* himself recom-
 mends it to gross, *well* Persons, to *vomit* three
 Times a Month to preserve their Health.
 And to lean *well* Ones, to *vomit* twice a
 Month for the same Purpose. Whatever be
 in this, certain it is, where continual *Vomit-*
ings and Reachings are the *Symptom*, a gen-
 tle *Vomit* can never be amiss; when Bleeding
 has been premis’d, and Circumstances forbid
 it not. It were to be wish’d, that the *Modern*
Method of gentle Stomach Purges, with inter-
 pers’d *sweetening Powders* (as they are called)
 could supply the Place of Vomits, because of
 the

the Roughness of their Operation, and the expence and hurry of Spirits they bring on weak People. But where there is an Overflowing of the Gall, or any Quantity of green, yellow or black Choler lodg'd in the Bowels (which is generally the Case of Hysterick, and Hypochondriac Persons, and of those troubled with nervous Distempers) by such a Method you will but turn *Birdlime* into *Plaster of Paris*, and you may purge out the *Guts*, before you move these Humours: And even in other Cases, where viscid *Phlegm*, or sharp Crudities are the Causes of the Reachings, Purges will signify very little towards carrying them off. These viscid Humours having too long a Journey to march, by that Course. As to *Rhubarb*'s purging of Choler, 'tis a meer Deceit, the Colour of the Medicine giving it that *Tincture*, which in working is reckon'd *Choler*. For the Contents of the Bowels take their Colour from that of the purging Medicine: Or the Colour arising from the Action of the *Salts*, contain'd in the *Medicine*, upon the *Salts*, contain'd in the *Guts*.

LV. The *Gout* in the *Guts*, on its first Seizure, may be easily treated as a bilious *Cholic*; only the *Opiats*, commonly and justly given in the *Cholic*, are not here to be used, but in the last Extremity. But this Distemper ought to be treated altogether in the Manner prescrib'd in the former Section, about the *Gout* in the Stomach.

LVI. There remains but one Distinction more of the *Gout*, and one which has not hitherto been much consider'd: For as the *Cholic* or *Asthma* is, so the *Gout* may be, divided into the Humorous and *Nervous*; tho' this Distinction depends more upon the Complexion of the Patient, than the abstracted Nature of the Distemper. The Humorous *Gout* happens only to People of grosser Habits, more robust Constitutions, and more stiff and springy *Fibres*, and is the *Gout* which I have been hitherto treating. All I can further add to what has been said, is, that under the Fit white Wines are more eligible than red; because those part more readily with their Spirits, and are less astringent than these. And for the same Reason in the Intervals, the red is preferable to the white: Tho' neither of them, in either Case, be useful or necessary, but because Custom or Habit, which it is not safe to alter suddenly, has made them so. For in all the *Ottoman* Empire, where little Flesh Meat, and no Wine is used; and in *Spain*, where they use them very moderately; and among the wild Mountaineers in the *northern* Countries; and the lower Rank of the People in every Country, where they can procure neither, there is little or no *Gout*. Rubbing the Part affected with a soft Hand, or warm Napkin, as strongly as the Patient can bear it, is the ready way to make the Humour perspire in
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the Fit. And cold Bathing, and Rubbing with a Flesh-brush, Morning and Night, are some of the most certain outward Means, to bring Strength and Nourishment into it, in the Intervals.

LVII. *Schol.* I have had some Reflections about the Preference between old *French* Claret, and old *Portugal*, or *Spanish* Wines, in the Intervals of the *Gout*. The generality give into the latter Opinion: But I very much doubt, if with any just Reason, or certain Observation. Without all peradventure, *French* Wine will more readily throw out a Fit of the *Gout*, than those others. But that, in my Opinion, is so far from being an Argument against it, that it is in its Favour; for certain it is, that a single Bout, or two, of hard Drinking in *French* Claret, (and these are more than sufficient to throw out a Fit of the *Gout*) cannot store the Blood with such Plenty of *gouty* Matter, as is sufficient to furnish out a Fit. Nature works by slower Degrees, and such a drinking *Bout* can no otherwise produce a Fit of the *Gout*, than by the Wine's Astringency, strengthening the Stomach, and bracing the Fibres of the Vessels, and by its generous Warmth, supplying plenty of Spirits, the Force of the *Circulation* becomes such, as to be able to drive out the dormant, *gouty* Humour that lay dispersed thro' the Habit. And if there be any faulty Humour in the Body, I think it a great Advantage to have it

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thrown

thrown out, upon its proper Seat. It is objected likewise, that *French* Wines have more *Tartar* than those others: But I cannot tell, if that Observation be just. For tho' more *Tartar* be found in the Vessels, containing *French*, than *Portugal* or *Spanish* Wines, that argues only, that the *French* throw off their *Tartar* more readily than those others. And tho' upon Distilling *French* Wines, there remains more *Tartar* than in Distilling those others, yet to compensate that, there remains, in Distilling *Spanish* and *Portugal* Wines, a burning corrosive Oyl, infinitely more destructive to the Stomach, concoctive Powers, and small Vessels, than any *Tartar* can be; and which is not to be found in distilling *French* Wines: And I very much question, if *Tartar* be so unfriendly to human Bodies, as is imagin'd. If so, we shall lose a great many fine Medicines. Add to all these, that in distilling *Portugal*, and *Spanish* Wines equally strong, and of an equal Quantity, the *French* yields abundance more Spirits, of a higher, and brisker Nature, and of a less hot, and burning Quality, than those others. The rotting of the *Salts* in any of these Wines, is ridiculous; the *Salts* being of a much more durable Nature than the *Spirits* themselves. All that Time can do for them, is by the repeated *Fermentation* to lessen the Size of the *Salts*, and *precipitate* towards the Bottom of the Vessel the grosser Parts, so that the lighter

er may be more easily separated from them : And on this Consideration, the *French* has the Advantage likewise. For by reason of its comparative Lightness, and its more readily parting with its *Salts*, it sooner becomes ripe, than the *Spanish* or *Portugal* Wines. Those who live very temperately, and drunk but a few Glasses after Meals, may content themselves with old *Spanish*, or *Portugal* Wines : But the *gouty*, who live more freely, ought certainly to chuse generous *Claret* : Tho' it be Custom only makes either necessary in any Quantity : And they who are averse to, or fly Pain at any rate, must content themselves with old *Portugal* Wines only.

LVIII. Having mention'd cold Bathing, I am the more willing to set this so safe and universal a Mean, for the Recovery of the weaken'd Parts, after a Fit of the *Gout*, in a clearer Light ; because a groundless Jealousy of the Danger of its throwing the *Gout* inwardly, has made it universally disus'd. Nothing made a greater Noise upon its first Restoration, and nothing cou'd have sunk lower in its Reputation since, than cold Bathing : And it will always happen so in Things fitted to the vulgar Capacity, when they are universally prescrib'd, without Distinction and without Choice. Those who know how greatly Foulness and Uncleanliness promote Epidemical, Pestilential and Infectious Distempers, can only

only tell what Cleanness contributes to Health. The *eastern* People (whose Laziness, in other Things, is owing to their Climate) have found cold Bathing and Ablution so necessary to their Health, that they have made it a part of their Religion, as it is a Precept of a Religion of a nobler Extract, from whence they borrowed it. If the modern Doctrine be true, as I really think it is, that the smallest *Fibres*, or those of the last Division, in animal Bodies, be not open and pervious, but solid; then it may be affirm'd, that warm Water, (I mean pure Element, endu'd with no medical Principle) by the active Power of its Heat, must necessarily relax such *Fibres*. And that cold Water, from the *Nitre* which produces its Coldness, must necessarily contract them. The Tumor of the *Gout*, like other inflammatory Swellings, is owing to an Obstruction, or to the *gouty* Humours flowing faster by the *Arteries*, than it can be receiv'd by the Veins; the smallest or capillary Vessels are thereby extended and stretch'd, beyond their natural Power of Restitution; so that when the *gouty* Humour is spent by Perspiration, or driven into the Veins, by the successive Stroaks of the Circulation; the Obstruction remov'd; and the Pain entirely gone off; the Vessels continue thus widen'd and stretch'd, beyond their Power of Restitution, for a long Time after. And this is the sole Cause of the long and tedious Weakness on the Part after the Fit is over; which wou'd yet
continue

continue longer, did not the Coolness and Pressure of the ambient Air, and the now sufferable Weight of the Cloathing, give the first Impulses to the *Fibres* towards their contracting themselves again. Now nothing in Nature can so readily or so certainly bring this about, as Bathing in cold Water: For the *Nitre* in the Water, which is the Cause of its Coolness; and also the uniform equal Pressure upon the Part, which arises from its Gravity and Fluidity, concur to communicate to the *Fibres* a strong and lasting Impulse towards restoring themselves to their natural State of Contraction. And the *gouty* Humour now being spent, and the Obstruction entirely remov'd, as is suppos'd, how can any such Humour be translated upon another Part, by cold Bathing, more than if the Person had never had the *Gout*? Now to make this Remedy still more effectual, after a previous Course of cold Bathing, cold Pumping on the Part, by the Force of a Pump, or the Fall of Water from a Height, may be conveniently us'd: The wonderful Efficacy of which is no less certain here, than it is in white Swellings on the Joints, where, I think, it is a never failing Remedy. I am very well inform'd of the Case of a very considerable Person, who for many Years before, being tormented with constant and uninterrupted Pains of the *Gout*, Summer and Winter, by daily Bathing in a Tub of cold Water, has, for these several Years
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by-past, brought them to regular and periodical Fits, at the cardinal and critical Seasons only; and of no longer Duration than usual. I know also an ingenious Physician, who, after a Fit of the *Gout*, goes daily into the cold Bath, till the Part has recover'd its natural Strength, which constantly happens in much less time than it would do otherwise. And many others, who are considerably strengthen'd, and preserv'd from catching Cold, by cold Bathing in the Intervals of the *Gout*; tho' this Practice is very cautiously to be gone about by the Old and Weak.

LIX. The *nervous*, and flying *Gout* (both which I take to be the same, and to differ from the windy *Gout*, which is nothing but a *Hypochondriacal* or *Hysterical* Symptom) is owing to the weakness, softness, or relaxation of the *Nerves* of those Persons who labour under it. All the Solids of the Body are made up of small Threads or Filaments of different Natures and Textures. They are divided into the *Fleshy*, the *Nervous*, the *Membranous*, and the *Bony*; and make up the solid Substance of the whole animal Body: But all of them agree in a greater or lesser Degree of Springiness or Elasticity. And it is observable, that some of the most perfect springy Bodies are made of animal and vegetable Substances; such as Ivory, Ebony, and Whalebone. Wherein the general Nature of Elasticity

city consists, or what is the particular Cause of the eminent Springiness of animal *Fibres*, is as hard to explain as conceive; which notwithstanding, is the noblest Instrument of all the Actions and Functions of an animated Body. All the Attempts hitherto made to discover the particular Nature of a *Contractile* and *Distractile* Animal *Fibre*, to me seem insufficient and conjectural. *Lewenhoeck* has discovered, by his Glasses, that the smallest *Fibre* of an *Elephant* is not bigger than that of the smallest *Insect*: And if the modern System of Generation be just, to wit, that an Animal or Plant comes from another lesser one; then Growth is nothing, but the unfolding the original *Membranes* and *Fibres*: And the Length of every *Fibre* is the same in the youngest, as in the full grown Animal or Plant. So Growth and Motion both, that is, the whole Business of the Animal Life, is owing to the Springiness of these *Fibres*. The best Resemblance I can make of them, is that of a long Hair, or small twisted Gut, which, when stretched to any Length beyond its natural State, will restore it self again to its former Dimensions. And in this Contraction and Restitution of an Animal *Fibre*, the greatest Mysteries of the whole Structure consist. As there are some People who have hard, gross, stiff Hair, with a strong Spring; so there are others, who have soft, fine, weak Hair, with a feeble Spring: And generally speaking, as the Hair is, so the

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threads, filaments and *fibres* of the Body are. Those whose *Fibres* are soft, fine, weak, and of a feeble Spring, are generally said to be of weak *Nerves*, and liable to *nervous* Distempers. And here we may observe the Difference between more tense and stiffer *Fibres* and more springy and elastick ones. All the *Fibres* of the Body are in a State of *Distension*, as is evident from the gaping Lips of Wounds. Two Persons may have *Fibres* of the same Degree of Springiness and Elasticity; and yet in their natural State, and original Formation the *Fibres* of the one may be more stretch'd, bent and distracted, and consequently more stiff and tense than those of the other; whereby the more stiff or tense *Fibres* making a greater Resistance, and being with more Difficulty stretch'd and widen'd, will give more Pain, when a gross Fluid passes thro' them, than less stiff or tense *Fibres* will. Which gives an Account why, of two Persons, both of them of weak *Nerves*, the one shou'd have the *Gout*, the other be free from it. Persons of weak *Nerves* must necessarily have less Strength, a weaker Pulse and Digestion; a slower and more imperfect Circulation of the Fluids, and a less free and perfect Perspiration; and if they happen to indulge in strong Meats and generous Wines, they must become subject to *Hysteric*, *Hypochondriac*, and *Cephalic* Disorders. But if, together with weak *Nerves*, a greater Degree of Tensity or

Stiff-

Stiffness be join'd, under the same Circumstances, they will be liable to *gouty*, together with the foremention'd Disorders. But by reason of the natural Weakness and less original Springiness of their *nervous Fibres*, the Fits of these *Gouts* will be less painful, and more constant.

LX. *Schol.* I have a long time suspected the reasonings of *Physicians*, and the Accounts given by them of the Nature of Diseases, that were found on *nervous Juices* and *Fluids* their Motion, Nature, and Qualities: And yet it will be a great *Bawlk* on the *Theory* of Distempers, the boasted *Politèness*, and the admir'd *Fineness* of the present Age has advanc'd, should there really be no such Fluids in *animal Bodies*. Certain it is, the *Ligature* on the great Trunks, and Bundles of *Nerves*, shew no such Thing. Let it continue ever so long, there appears no Swelling above, towards their *Origin*, and let them be squeez'd, or *milch'd* ever so long downwards, to the *Ligature*: yet no *Tumor* appears. The contrary of which happens to the *Arteries*, and *Veins*, in the like Circumstances, but on the opposite sides of the *Ligature*: And must happen to the *Nerves*, was any sensible Fluid contain'd in them. The resemblance between the *Cortical* Part of the Brain, and an *Alembick*, or Still, is too gross to support any Verisimilitude, and there is no Heat in *animal Bodies*, sufficient

to raise a Spirit out of their gross Fluids, how ever concocted, which require the greatest Heat to be sent over the *Helm*: And all that *animal* Concoction seems to do, is either by *Attrition*, to break the Food into smaller Parts, or by *Fermentation* with other Liquors, to dissolve the Union of its Parts. Neither of which ever rises to that Subtily, as to render gross Bodies *imperceptible*, The most subtile Fluid we observe separated from *animal* Juices, by the meer Laws of *Secretion* (which is all we conceive is done, to separate the finer Parts of *animal* Fluids from the grosser) seems not to *refine* much above the white Water *hysteric* Persons make, or the Steams emitted by *Perspiration*, which when condensed, are sensibly thick and clammy, and very much unfit for the Uses ascrib'd to *animal* Spirits. Moreover, if we consider the *Make* and *Configuration*, the best *Microscopes* give of *nervous Fibres* we shall find them neither fill'd with any Juice, nor previous to receive any: For that milky Substance we observe about them, seems design'd by Nature, to preserve them *moist* and *glib*, for their mechanical *Functions* of *Elasticity*, and is, by far, too gross to answer the ends of *animal Spirits*. *Lewenhoeck*, after having prepar'd *animal Fibres* of several sorts, for his Observations, found them by the *Microscope* compos'd of many hundreds of lesser *Fibrils* bound together, by a *spiral* One; which *Fibrils* were so small, that six hundred

dred of them (if I remember right) came to make up the Bigness of a Hair of the Head, and could never observe them pervious, or hollow: Lastly, If we consider the *nervous Fibres*, as so many *cylindrical Tubes*, we shall not find them of a Form, *Analogous* to that of those which we sensibly know are contriv'd by Nature to carry a Fluid (and we well know Nature is uniform in her Operations, and constant to her self) I mean the *Arteries* and *Veins*, whose Figure is certainly *Conical*: So that by their continually lessening *Diameters*, a greater Action is impress'd on the *springy* Sides of the Vessels, by the included Fluid: Which by *Re-action* being return'd on the Fluid, it is thereby promoted on its forward Motion, and so the *Circulation* is performed, else the Juices would putrify, and stagnate. Whereas in *cylindrical* Vessels, let their Sides be ever so *Elastic*, the Resistance from the advanc'd Fluid being so great; it is impossible the Motion of the *nervous* Juices should be propagated with a sufficient Velocity, to the distances they run; let the impress'd Force, as its first setting out be what it may be with any Reason suppos'd. Add to all these, that since the *Nerves* are suppos'd to be the *Medium* of Sensation, as well as the Instrument of *Motion*; if they are pervious, and full of a Fluid, it is absolutely impossible to conceive, how they can so instantaneously convey their Impressions in contrary Directions
back.

backwards, and forward. But what seems to me an *Experiment* of the *Cross*, as it is called, or a Fact obvious to the Senses, which shews the Solidity and Imperviousness of the *Fibres*, is Dr. *Glisson's* * *Experiment*. “ Pro-
 “ vide, says he, a glass *Tube*, of a proper Width
 “ and Length: To which upper and outward
 “ Side near its Orifice, another Tube like a
 “ *Funnel*, may adhere: Into the Orifice of the
 “ larger *Tube*, let a *Brawny* strong Person
 “ thrust in his whole naked Arm, and the
 “ Orifice be so fasten'd to the Shoulder, that
 “ no Water can run through it, then let so
 “ much Water be pour'd in, through the *Fun-*
 “ *nel*, as to fill the greater glass *Tube*, and to
 “ rise to some height in the *Funnel*. These
 “ Things prepared; let the *Operator*, by turns
 “ work and strongly move all the Muscles of
 “ the Arm, and by turns, let them rest: In
 “ the time of the Motion, and Working of
 “ the Muscles, the Water will sink in the
 “ *Funnel*, and in the time of their Rest and
 “ Quiet, it will rise again. Whence it will
 “ appear, that the Muscles, instead of swell-
 “ ing and being inflated, during the time of
 “ their Action, are lessened, contracted, and
 “ sink into their own Substance, for did they
 “ swell, or were inflated, the Water in the *Fun-*
 “ *nel* would rise, instead of sinking. So far *Glif-*

* See *Glisson de Ventriculo & Intestinis*.

son. And indeed it is evident to the Senses that while the Muscles of the Arm are in violent Action (as in playing at *Foys*) the superficial Veins and Arteries swell over all the Muscles, which proceeds from hence, that the Fibres of the Muscles being drawn in, and sincking into their own Substance, press on the internal Arteries, and leave the superficial ones free and loose quite round: Whereby the Blood, finding a greater Resistance, flows more slowly in the internal Arteries, and is more plentifully derived into the superficial Arteries and Veins, through their lateral Branches. In a Word, all muscular Action is performed by the Muscles being harden'd, and compress'd inwardly into their own Substance (witness the Heart, which being *red* in its Relaxation, turns *whitish* in the Contraction) which cou'd not possibly happen, were any Fluid, how subtile soever derived through the Fibres, to assist in the Action of the Muscles. Those who desire to see more on this Subject, may consult the learned *Deidier*, *Professor of Physick* at *Montpelier*, his Discussion of this Question. From all which, I am apt to think, that both *Sensation*, and *Animal Motion*, are performed by the Action of an *extrinsick Principle* on solid and springy *Fibres*, as the great Sir *Isaac Newton* seems to hint.

LXI. *Coroll.* Since then perfect and intire *Health* consists in the Tightness, proper *Tone*,
and

and *Springiness* of the solid *Fibres*, as well as the due Fluidity, uniform Constitutions and full and free *Circulation* of the *Animal* Juices, as is evident from the foregoing, together with the immediately preceeding Observation: We may thence learn, what is necessary for preserving it so, as long as Nature has contriv'd it to last. To wit, a proper *Regimen* of Diet, for maintaining the Fluids in such a Condition, together with a due Degree of *Labour* and *Exercise*, for preserving the Tone and Spring of the solid *Fibres*. Neither will be ever sufficient alone, without the other; for let our *Diet* be ever so exact and proper; our Fluids, ever so sweet and duly temper'd; the *Circulation* ever so full and free; yet if the solid *Fibres* become resty and diffus'd, loaded with useless Particles, soak'd in superfluous Fluids, relax'd and flabby, the Juices will at last stagnate and corrupt, and the whole *Oeconomy* languish and suffer. But if to a proper *Regimen* and *Diet*, due Labour and *Exercise* be join'd, the Muscles will be habituated to their proper Actions, the Fibres freed from a foreign Load, all undue *Humidity* will be drawn off by *Perspiration*, the due Temperament of the Fluids will be preserv'd, and the proper *Tone* and *Spring* of the Solids maintain'd. And here we may observe the Wisdom and Fitness of the first Command, to *New-fall'n-Man*, of his infinitely wise *Maker* and *Master*, which is commonly look'd upon, as a *Curse* rather than

than a wise *Precept*, to wit, * *in the Sweat of thy Face shalt thou eat Bread. If the Rich do not in some Measure imitate the Diet and Labour of the Poor, and in some Degree keep to the Letter of this Precept, their Riches will become a real Curse, in as far as Health is more valuable than Wealth.*

LXII. *Coroll.* Hence also we may learn, what *Vapours, nervous Disorders, hysteric and hypochondriac Affection*, truly and properly are, to wit, an undue *Relaxation*, Looseness, or want of a proper *Tone*, or Spring, in the *Threads, Filaments or Fibres* of the Solids, either from a natural Weakness, or an Ignorance, or neglect, of a due *Regimen of Diet*, and proper Exercise. Let us but suppose the *Fibres* of the Solids are *relaxed*, loose and weak, and that a proper *Regimen of Diet* is not observ'd, nor due *Exercise* prosecuted. 1. The first Consequence will be, that the Digestions will be *imperfect, gross, and glewy*. 2. The next, that the *Stomach and Guts*, their *Glands* and internal Coats, will become loaded and distended with Wind, *Phlegm, Cholera, and Crudities*, And, 3. Thereby *sharp, sour and ill-condition'd Fumes, Steams and Vapours* will be constantly ascending to the *Brain*, to cause *Head-aches, Giddiness* and Oppression of Spi-

* Gen. 1. Ver. 19.

rits, to discompose its natural and usual *Functions*, and to paint *false* and *delusory Images*, and *Ideas* on the *Imagination*. And this is the first Stage and Degree of the *Vapours* and *nervous Disorders*, properly so call'd, where the Causes thereof are confin'd to *alimentary Passages*. But these causes being continued, and proper Remedies neglected, when through time, these *Fumes, Steams, Wind and Vapours*, get with the unconcocted and viscid *Chyle*, through the *Lacteals*, into the Blood, and other Juices: And the *Perspiration*, by its *Glewiness*, cannot pass by its *Drains*, over the Surface of the Skin, nor the other *Secretions* be duly made; there will follow from the State of the *Stomach* and *Bowels*; 1. Loss of Appetite, sour and sharp *Belchings*, continual *Heart-burnings*, *Vomitings* of green or black *Choler*, nervous *Cholicks* and *Asthma's*; and at last, a total or partial Obstruction of the *Lacteals*, and thence *Leanness*, *Wasting* and *Death*. 2. From the State of the Juices, and the *Glewiness* of the Fluids, there will ensue a *Circulation* only, through the greater Arteries, and Veins, and their *lateral Branches*, whereby the *Extremities* will be render'd *cold* and *chilly*, a Sensation, like that of cold Water sprinkled over the Body, will be often felt, *drilling* along its Surface; *fleeting* and *unconstant* Pains in the Limbs, like that of a *cold Rheumatism*, through Crudities and Obstructions in the small Vessels; and windy *Tumours*, and

and *white Swellings* on the Joints, especially on the extreme Parts. 3. And lastly, when these sharp and acid *Streams, Fumes* and *Vapours*, have made their way through the *Glands*, or Sides of the *smallest Vessels* into the Cavities of the *Brain*, the *Interstices* of the Muscles, and between them, and their involving *Membranes*; there will follow grievous and constant *Head-aches*, perpetual *Giddinesses*, tearing *Punctures* over the Eye-balls, *Hysteric Fits*, *Convulsions*, *Epilepsies*, and *Apoplexies*, and all the black List of Miseries and Tortures, which often terminate in a total *Alienation* of the *Understanding*, different according to the different original *Complexion*; dark *Horrors* or *Despair*, which tempt the distracted *Sufferer* to make away with it self, or a sudden end of its Miseries, in the end of its miserable Life. It is certain tho', this last Stage seldom or never happens to any one, but through a *flagrant* and obstinate neglect of proper Remedies, in due time, in the Patient, or a supine Carelessness in the Friends. As it is also certain, that the first Stages of this Disorder may arise from an original and hereditary Weakness in the Solids, any violent Evacuation or enormous Passion of the Mind, which the Patient cannot prevent, or be justly blamed for: But the common and acquir'd *Vapours*, may be very properly describ'd, in that Expression of *Holy Writ*

of *Idleness and Fulness of Bread*. The Causes thus known, the Prevention and Cure will be natural and easy, which I shall have occasion to set forth hereafter.

LXIII. *Corol.* From this Account of the *nervous Gout* and other *nervous* Distempers, 'tis plain, all Evacuations (except the most gentle) must be prejudicial in them. Gentle Vomits, as they cleanse the Stomach and Bowels, and principally as they free the *Nerves* from all extraneous Bodies, and increase the Perspiration, by the violent Convulsions and Contractions of the internal Muscles and Membranes; Blisters, as they open the Obstructions of the small Vessels, by their external, and thin the sily Juices by their internal Efficacy; I say, both these Evacuations may not only safely, but with great Advantage, be us'd in *nervous* Cases. But all violent Purges and excessive Bleedings, are religiously to be abstain'd from, as increasing the original Weakness. Purges in People of weak *Nerves*, in chronical Cases carry off a great part of the Nourishment of almost three Days. Vomits, on the contrary, carry off only those Crudities, that send up to the Head and *nervous* System, the noxious Fumes and Vapours that cause their Misery. Purges relax and weaken the *Fibres* of a natural and necessary Function, to wit, those of Digestion: Where-

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as Vomits can but weaken the Action of *muscular Fibres*, less us'd, strong in themselves, and not so necessary to Concoction; as is evident from *Monsieur Chirac's* Experiment about Vomiting. Purges carry off little but what would otherwise pass off, in time, by the natural Course of the *Peristaltic* Motion; and generally leave behind them what wants the inverted Motion, as they found it. Whereas Vomits pump up those Crudities that Nature it self would (gladly, so to speak) throw up, by the same Organs, the same way Nature tends. *Lastly*, Sour and acid Humours, lodg'd in the Stomach and Guts, must necessarily weaken both, more than either gentle Vomits, or Purges possibly can; with this Difference tho', that a very gentle, natural, or artificial Purging, continu'd for any long time, in Persons of weak *Nerves*, shall both weaken the Person, and waste the *Muscular* Flesh. Whereas you shall find, after several Months daily vomiting, in a Sea Voyage, a Day or two's Refreshment ashore restores the Person to a greater Degree of Alacrity and Strength than before: Whence it comes to pass, that Persons of weak *Nerves* are so much reliev'd and rais'd by Vomits; and, on the contrary, so much sunk and depress'd by rough and strong Purges in chro-nical Cases. What farther is to be expected in such Cases, is to be done by a regular and strict Diet, fitted to the mere Necessities of Nature.

Nature. Strengtheners of the digestive Faculties, (and here the *Bark* and *Steel* claim the first Place, as being the most certain Strengtheners of weak *Nerves*) gentle and constant Exercise, as encouraging the Perspiration: *Aromatic* and spicy Bitters, volatile attenuating Medicines, and whatever may be thought fit to nourish, comfort and support the Animal Functions.

LXIV. In low, *Hysteric*, *Cephalic*, and *Nervous* Cases, nothing is to be done without an uniform low Diet, and a strict *Regimen*; and that of the lightest Foods, and the least Quantity. And the Reason is, the whole *System* of the Nerves, and the *Fibres* of the Solids being relax'd, the *Concoctions* are proportionably weaker, the Force of the *Circulation* more impair'd, and the *Perspirations* less, and consequently strong Food of hard Digestion, or a greater Quantity of any sort of Food, than the Stomach can concoct, the *Lacteals* receive, or the Expences of Living require, must lie crude, and corrupted in the *alimentary* Passages, and beget gross Chyle, and sluggish Fibres, which will be disobedient to the Command of the Will, improper for the *Functions* of Life, and will necessarily run into Disorders, and *Convulsions*. I have seen some of those suffer even unto the last Extremity, and to mortal *Agonies*, from a large Meal, and Food of hard Digestion, or the least excess

cess in strong Liquors. And I never saw a perfect Cure attain'd in such, where a spare thin Diet, of but little Flesh Meat, and that of the youngest, and whitish Kind, (as least abounding with urinous Salts) less Fish, and least strong Liquors, were not join'd to proper Remedies. And this Diet alone (with gentle Vomits, some few Stomach-Purges, light Bitters, mineral Waters, and riding on Horseback) has been more effectual in such Cases, than all the rest of the Apothecary's Shop put together. The Case of an eminent *Physician* in *Croyden*, dead not long ago, is very particular. He had long labour'd under the *Morbus Caducus*, or *Falling Evil*: And in the Infancy of his Practice, had often dropt off his Horse, going to his Patients, and had been carried home by the next Waggon. He had try'd all that *Physic* could do, or Physicians advise; as he himself inform'd me, to no manner of Purpose. But by slow observation, he had found, the lighter his Meals, the lighter his Fits: At last, he cast off all Liquids but Water, and found his Fits weaker, and their Intervals longer, and by Degrees finding his Disease mend, as its Fuel was withdrawn, he took to *Vegetable* Food, and Water only. This he found too windy for his Stomach, tho' it put an intire *Period* to his Fits, without any Relapse. But after several Trials, he fix'd on two Quarts of *Cows-Milk* every Day: A Pint for Break-fast, and another for
Supper,

Supper, and a Quart at Noon: Without Fish, Flesh, Bread, or any spirituous Liquors, or any thing else whatsoever, except Spring-water. And this he seldom wanted, but after great Exercise and hot Weather. In the fourteen Years he lived afterwards, he never had the least Interruption in his Health, Strength, or Vigour: Except once by catching an Ague, as he rodethro' the *Hundreds of Essex*, which chewing a little *Bark* quickly remov'd; till by lying in a damp Bed in a frosty Season, he caught a violent Cold, which ended in a *Pleurisie*: And neglecting to bleed himself, thro' an Opinion of the Sufficiency of his Diet to cure all Distempers whatsoever, it cut him off in a few Days: Else in all probability he might have lived healthy, and in the intire Use of his Senses, and Faculties, as long as *Cornaro*: Now all nervous, and *cephalic* Distempers being Branches from the same Root, and *Cadits* of the same Family; this short History shews what Wonders a *Regimen*, and Diet, if duly instituted, and religiously pursued, will work in them. I have met with the like Success from a Diet less rigorous, and more various, tho' spare and uniform.

LXV. There is a Disorder belonging to the *Sex*, commonly ascrib'd to *relax'd Fibres*: The most dangerous, obstinate, and hardest to be cur'd, of any they are subject to; which,
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in my Opinion, is neither fully understood in common Practice, either as to its Cause, or its Cure. For besides, a State of weak *Nerves*, and relax'd *Fibres*, there is also an *ill Condition* of the Juices, which constantly attends this Disorder, as is evident from the Circumstances of its Discharge, its Colour, Consistency, and the Pain it gives: Besides the unhealthy *Complexion*, the imperfect *Concoction*, and the *Sickness* of the Blood accompanying it; there is one remarkable Difference between it, and the *first Stage* of the *immodest Infection*, viz. That while the *Lunar Disorders* happen, the first never appears; but in this last, they are ever Companions, as I constantly, and without once mistaking, have observed. And this single Observation, is sufficient to determine the true Nature of the Weakness we are now speaking of, viz. That it arises from the Sickness of the Juices; which continue to flow from the same *Organs* and Vessels the *Lunar Disorders* come from; which *Organs* and Vessels, through the Weakness of the *Nerves*, and the Laxity of their *Fibres*, not being able to shut themselves altogether, and with a sufficient Spring, so as to hinder every Fluid from passing; But after having contracted so far, as to shut up the larger Clusters of the *red Globules*, they are too weak intirely to close; but continue to let the ferous Part, and the lesser *Clusters* pass. And it is evident from Sir *Isaac Newton's* Discovery about Colours, that they

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intirely depend on the Magnitude of the Parts. And that this is the true Cause, and genuine Nature of this Distemper, when it is habitual, and not owing to Accidents, is evident from many Circumstances attending it. One I shall mention, which I think will be sufficient to ascertain this Account, *viz.* That this Disorder, if not curable, generally ends in a Consumption or Dropsy; and these are the very Distempers, which a constant Drain and Expence of the *Arterial* Juices produce. As also, if this disorder be preposterously stopt, it gives immediate Pains, Swellings, and Inflammations in the Breasts, which every one knows a Stoppage of the *monthly Periods* do in the same manner produce. From this Doctrine, thus explain'd, it is evident that all *Astringents*, properly so called, *viz.* (such as thicken the Blood, constringe the Vessels, and dry up the Humidity, only, as drying Earths, Shell-Powders, *Vitriolic*, and *Styptic* Medicines) and all *Balsamicks*, and *terebinthinate* Medicines (which spoil the Stomach, weaken the Digestions, and relax the Fibres more) are either useless, or hurtful in the *first* Instance; and that the true Method of Cure is to treat it at *first* as a *Cachexy*, or ill Habit of Body. Wherefore gentle *Vomits* succeed wonderfully here, as they mend the Digestions, open Obstructions: But principally as they are the best Revulsions from the Part affected. Next a *Regimen* or Diet, such as fits a broken Constitution;

stitution; and then the Cure may be finish'd by *German Spaw*, *Tunbridge*, and other acidulated, and chalybeat Waters, washing down a strengthening Medicine of the *Bark*, *toasted Rhubarb*, *Orange-peel*, *astringent Bitters*, and *astringent Saffron of Steel*. Sometimes this Disorder comes from a *cancerous* and *scrophulous Taint*; in which Cases nothing is to be done, but to palliate, or relieve, except by a total *Milk Diet*.

LXVI. There is one Calumny, amongst many others, Ignorance and Partiality have very unjustly thrown on the weaker, tho' certainly the least corrupted part of this our Race: (Weaker, I mean, as to the fleshy Fibres, for *Souls*, and *Spirits*, as well as the World of *Spirits*, admit of no *Sexes*) viz. That the Barrenness, Unfruitfulness, and want of Posterity, so frequent in *England* (especially among the better Sort) is commonly cast on them; whereas it is very great odds, if the Fault lies not on the other Side. If the Account of *Generation*, commonly admitted now, established and confirm'd by undeniable Experiments, and Observations, both in the vegetable and animal Kingdoms, be true and just, as I really think it must be in the main, which is sufficient for my purpose, viz. That the *Female* furnishes not only a proper Habitation, fit Nourishment, due Warmth, and such like outward Conveniences for the little *Beings*; but

that the *vital Principles*, the *living Particles*, proceed altogether from the *Male*; than it will follow, that the Concurrence of a great many more Circumstances, and their precise Degrees (such as Temperance, Coolness, a just Mixture, due Consistence, and exact Proportion of the Parts of the Blood, Spirits, and other Secretions: In a Word, a more nice, precise, and critical State of Health) is necessary for *Fecundity* in the Male, than in the *Female*, and that in as high a Degree, as Life is exalted above *animal Nutrition*, or Increase. The Liberties Men take beyond Women, the Riot they run into, their continu'd *Debauches*, the Vicissitude of Heaters and Coolers, the high season'd and inflaming Diet, the better sort of young Persons of our Sex accustom themselves to; will more than sufficiently justify this my Observation. How can Fruit be expected from a Tree, whose Root is roasted, spiced, or salted to a Mineral? Life is likely to hold long, or be very healthy, that comes season'd, and sows'd in *Hermitage*, *Tokay*, or *Citron-water*. The Observation is so true, that here at *Bath*, where generally, and very justly, such Cases come, as to their last Resource; I have often succeeded by making proper Application to the least suspected Party, by bringing them to a due State of Sobriety, Coolness, and Health, the only just Foundation of Fruitfulness in either Sex. How fertile are the *Scotch Highlanders* on their Milk and Oatmeal?

and

and the *Native Irish* on their Potatoes, and Milk? it is common to see at their Doors, a range of Children like the Steps of a Stair, shewing the Number of Years since their Parents came together. Whereas here in *England*, you shall see great Families extinguish, and great Estates descend to an *Hosler*, or a *Centinel*, scarce within Arithmetical Degrees of Kindred, for want ev'n of a *Female* in a direct Line, to inherit. Such Observations as these (as my Friend the *Milk Doctor* of *Croydon*, since inform'd me) enabled him to direct several Families which he nam'd to me, towards Heirs of their own Bodies, who had liv'd, some Seven, some Ten, some more Years from their Marriage in despair of any. And I am very certain, if those who are so very anxious for Posterity, the want of which seems to make their only worldly Misery, would in any Time not long after the *Meridian* of their Lives, enter upon a Course of cooling, sweetning, and *fructifying* their Juices, by imitating the Labour, and Diet of the Poor, with other proper Assistance; they would more certainly give Heirs to their Families, and enjoy better Health themselves than they do. Provided there be not a *scrophulous*, or *venerial* Taint on either side. In which Case, I think their Infœcundity is no Misfortune.

LXVII. From the known Doctrine of *Nutrition*, it is evident, that the Food receiv'd into

to the Stomach, is there reduced to a *milky* Substance: the finer Part of which being separated by the *Lacteals*, and sent by a large Duct into the *axillary* Vein, returning into the *left Ventricle* of the Heart, is thence derived into the *Lungs*: They send it into the *right Ventricle*, and from thence it is squeez'd thro' the *Arteries* over the whole *System* of the Solids. The shorter and smaller Branches thereof serving to recruit, and repair the Coats of the Vessels, and *Organs* nearer the *Heart*, while the longer terminate in *Glands*: Some of which emit a shorter *Duct*, either for the Nutrition of the Parts, or for separating the *Recrements* that are to be thrown out of the Habit, while others terminate in yet much longer, and smaller *Ducts*, and run along with the Fibres (*Fleshy, Nervous, Membranous, or Bony*) that make up the Solids of the Body; and there leave proper Nourishment to recruit the Expences, or Decays of Life; and to repair the natural, or accidental Injuries they may suffer. Hence it is easy to observe how many *Alterations* Food and Medicines must undergo, and what a length of Way they have to pass over before they can reach the *Fibres*, which are the constituent Parts of all the Solids. As also how difficult it is, and what a tedious Time it must require to perform any great, or notable Alteration, or Effect on the Nerves. Now in a relaxed State of the *nervous System* (the Origin of all
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nervous, and *cephalic* Distempers) I can conceive but three possible Ways of contracting or winding them up, *i. e.* of curing them. The first is, by sending Nourishment duly concocted and sufficiently subtilized (so as it may readily quite pass thro' all those small winding *Channels* to the last solid Fibres) to fill their empty Pores, to swell their Bulks, and thereby to lessen their Lengths, *i. e.* to stretch, or wind them up: Hence the necessity of a low, cooling, uniform Diet: Hence the Use of gentle Vomits, which cleanse the *alimentary* Passages, and hinder their Impurities from mixing with the Blood, which by their internal Concussions shake off all *extraneous* Bodies from the *Fibres*, and by the strong Convulsions of the Muscles, open the Obstructions of the Vessels, and promote the *Circulation*. Hence the necessity of *Bitters*, *Aromatics*, *Chalybeats*, *mineral Waters*, Exercise, and whatever else can promote, or mend the Digestions, are indicated. (2.) By attenuating the sily Blood, and Juices whereby they may be sufficiently subtilized, so as to reach the *Fibres*, and carry into them proper Nourishment for winding them up, as was now shewn. Hence the Necessity of *Volatiles*, *Attenuates*, and *nervous*, or *antihysterick* Medicines, properly so called, is indicated. Tho' I have observed but little done by these last, except in Fits, and for a present Relief. (3.) By sending thither (as far as *Art* can do it)

it) Medicines, which when arrived there, may *straiten, stiffen, or wind up these relaxed Nerves*, which indicates the *Bark, Orange-Peel, toasted Rhubarb, Acorns, the Vitriolum*, and the *Crocus Martis*, and whatever else is endow'd with a cool bitter Astringency, with the *least Acidity*. From this Account we may observe, why Purging succeeds so ill in nervous Cases. For besides, that it carries off the Nourishment (the slow Digestion in these Cases makes it, that greater crude Quantities are carried off by a purge in them, than in others) it counter-acts the very Intention in the Cure, *viz.* the contracting or winding up the relax'd Fibres of the Solids, which it is impossible ever to execute, but by beginning at the Fibres of the *Stomach and Guts*, as we observe in the *Bark*, which never succeeds when it purges : At least neither so soon, nor so certainly ; (and therefore I always add a few Drops of *Laudanum* to it in weak Nerves) which from this Beginning, by continuance, propagates it self to the last Extremities, like the twisting of a Rope, where a Twine at the moveable Extremity propagates it self by Degrees, to the fix'd End, be their Distance ever so great. So that there is no succeeding in nervous Cases, without first rendering the Fibres of the *Stomach and Guts* tight, *i. e.* the Body firm, if not costive. And possibly, it may be from this Quality (*Astringency without Acidity*) with its being
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more easily digested, than Roots, and Barks are, that *Mistletoe* of the *Oak* (or of any other Tree) so justly celebrated by Sir *John Colebach*, is so successful in the Fits of younger Persons, even the *Epileptic* Ones, as I have partly experienc'd my self.

LXVIII. *Coroll.* It may not perhaps be amiss to illustrate this Method of Cure in a particular Case of *relax'd Nerves*: A Case, I say, which happening, tho' but seldom, yet has the most melancholy Appearance: And is not as yet, for ought I know, brought to so easy, and so certain a Method of Cure, as is here laid down, which is plainly deducible from the general Method describ'd in the preceeding *Scholium*; and that is the *Chorea Sancti Viti*, or *St. Vitus's Dance* Which treating after the following Method, I never fail'd of a standing Cure, in all those that came under my Care, as some now living can witness. The Party being young and otherwise healthy (else a proper Method for a Cure of a *Cachexy*, already describ'd, was premised.) To answer the first Intention of the general Cure, I order'd a Vomit (generally I combin'd either the *Emetic Wine*, with an Infusion of the *Ipecacohana*, or the *Tartar Emetic*, with the Powder of the *Root*, wherein the latter adds Certainty, and Expedition; the former Force, and Strength, to the Operation) to be repeated regularly on the same Day of the Week,

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for a considerable Time, till the Distemper began to decline (and then I lengthned its Intervals,) together with an *Anticachectic* Diet, already explain'd. To answer the second Intention, I prescrib'd for a Month, or six Weeks, on all the intermediate Days, a large Dose of *Æthiops Mineral*, with *Bath Waters* to wash it down. And *Lastly*, After this Course finished, to answer the third Intention, I gave an Electuary of the *Bark*, *Orange-peel*, Powder of *Acorns*, and *Crocus Martis Astringens*, to brace the Nerves inwardly; and order'd cold Bathing every other Day, for producing the same Effect outwardly; and the Cure seldom exceeded three Months.

LXIX The Distinction of an *Humorous* and a *Nervous Asthma*, *Cholick*, *Cough*, and *Gout*, &c. ought all, to be founded (in true *Philosophy*) on the Difference between a *firm*, *stiff*, and *stretch'd State*, and a *loose*, *flabby*, *relax'd State* of *Nerves*: And the different Method of treating them ought chiefly to consist, in the different Degrees of Evacuations they require. Those of the humorous Kind abounding in more gross, heavy, and fizy Humours, and a greater Plenty of them; require more plentiful and more powerful *Evacuations*: But then those of the nervous Kind, require always some previous *Evacuation*, in Proportion to weaker animal *Functions*. As for Example, in the Nervous, or *Hysterie*
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Cholic, when it is come to perpetual *Reachings*, inward *Throws*, and *Convulsions*, tho' the Patient vomits not gross *Choler*, or great Quantities of *Phlegm*, (tho' this last is seldom altogether wanting) yet there is still lodg'd in the *Glands* of the *Stomach* and *Guts*, a more subtile, and irritating Matter, which twitches, and sets the Muscular *Fibres* into those *Convulsions*. And the formal Difference between a *bilious*, and an *hysteric* Cholick, consists in this: That scarce any Thing but the Sharpness, and Abundance of those Humours, could possibly provoke these stiffer, and more firm Fibres unto such violent *Contractions*. Whereas the slightest, and most subtile sharp *Steam*, is sufficient to convulse these weaker and more relax'd Nerves: Which when once set a going (the chief Thing to be observ'd) will, like a *Pendulum*, continue their *Vibrations* for a considerable Time from the first impressed Force. And therefore let their *Reachings*, and Pukings be ever so violent, and frequent, a *nervous*, or *hysteric* Cholick, will not so readily, or so certainly terminate, as by first premising an artificial *Vomit* (contrary to *Sydenham's* Opinion) to cleanse the alimentary Passages from the irritating Cause; and then endeavouring by warm Cordials, proper *Antihystericks*, and *Carmenatives* combin'd with Opiates (in the least Volum) to settle and compose the *undulating Vibrations*. And both Cholicks are best pre-

vented by frequent, warm, gentle Purgers. It is for the same Reason, that gentle Vomits of the *Indian Root*; the *Jesuits Bark*; and a low Diet, that gives the best Perspiration, and begets the least of that acid Flatulency, which ferments into those *pulmonick Convulsions*: succeed best in the *nervous Asthma*; as the Syrup made of the express'd Juice of *Millepedes*, or *Hoglice* drown'd in white Wine, and giv'n by Spoonfuls, will infallibly cure Children's Convulsive or Chin-coughs; and as the *Squill Vomits*, Oils, and attenuating Medicines, such as the volatile Salts, and Plants (*Garlic* especially) do in the *Humorous*.

LXX. Having had frequent occasion to mention the *Bark*, as being absolutely necessary to the Subject I treat; it may not be amiss to remove one Objection against it; and the only one I have ever heard or read made with any Shew of Reason. I have taken as much of it my self, and as often, and have prescrib'd it as freely as any of my Age, I believe; and never observ'd it, either in my self or others, do any Hurt, except when it has been injudiciously and improperly prescrib'd, and that in continu'd acute Cases only. The Objection is, that it often leaves behind it a bad Habit, a *scorbutick*, *cachectic*, or *hectic* Constitution; bad *Lungs*, *Liver*, or *Stomach*; or some of the great *Viscera* spoil'd or corrupted. But the Mistake in this Objection lies
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here, to wit, that few Constitutions break, and seldom any of these great Organs become vitiated: but they begin with an intermittent or periodical *Fever*. And these I have constantly observ'd to be of that kind, and approaching that Season, which *Sydenham* most judiciously distinguishes from *vernal* ones, and calls *autumnal Agues*; and are indeed Symptomatical only, arising from Beginning Obstructions in the whole Habit, or in these greater *Viscera*: Where all Nature is at work, and the whole Organs labour and struggle to thin the fizy Fluids, and to open the obstructed Bowels; but not being able to bring about this End, Nature succumbs after every feverish Fit, thus excited, into a worse State. And even here too, the *Bark* does all its proper Office, in quenching, to wit, the violent *Paroxysms* of the *Fever*, which only can endanger the Life of the Patient; and allows Time for other Medicines to act. But when the Habit is already broken, and the great *Viscera* already unsound; it cannot be blamed that it does not restore these; nothing like that being expected from it, or ascrib'd to it. When the *Bark* has extinguish'd the feverish Fits, which threaten Death to the Patient, a Reprieve is obtain'd: In which, by deobstruent and attenuating Medicines, Health and Life may be secur'd. In relax'd *Nerves* of the *Primæ Viæ*; in almost all sorts or *nervous* and *cephalic* Diseases depending on these;

these ; in all *gouty* Disorders in the *alimentary* Passages ; in all *nervous Gouts* ; in all intermittent and *periodical* Distempers, or Pains whatsoever ; 'tis preferable to any Thing hitherto us'd ; only in very cold Stomachs and Constitutions, I have found a Decoction of the *Indian Bark*, by some call'd *Elatberium*, to be yet more effectual and strengthening ; as it will also more readily remove the periodical Disorders of such. But the *peruvian Bark* I never found did any Hurt, but in acute continued Cases ; where it runs into violent Purgings : And in the *monthly Purgations* of the Sex, which sometimes it will obstruct ; and therefore it ought not to be given without *Steel* ; which ought also to be added, when it is given in chronical Cases. It were to be wished only, in these Cases, it gave the same Relief the second and succeeding Times it does the first.

LXXI. I have formerly observ'd, that when the *Gout* becomes dispersed over the whole Habit, or fix'd and settled on a particular Joint, *mercurial Vomits* and *Purges* were absolutely necessary to dislodge it. But there is one Species of the *Gout* which miserably torments its Subjects, and yet yields not to that, or very rarely to any of the Methods in use ; I mean the *Gout* on the Hip-Joint, when fix'd and constant, commonly call'd the *Sciatica* ; and yet treated after the manner I'm to explain,
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never fails of a perfect Cure. The Foundation of the Method I had from the late *most learn'd and eminent Physician Doctor Archibald Pitcairn*; he having communicated it to me under no Restriction of Secrecy, I think my self oblig'd to publish it to the World, for the Benefit of the Afflicted. I have us'd it with great Success these several Years, and I think have improv'd it in several Particulars of the Management; and so never fail of a perfect Cure, if the Distemper is a genuine *Sciatica*, tho' of many Years standing; and after having baffled all other Attempts. It consists in taking from one, two, three Drams, to half an Ounce (according to the Strength of the Patient's Stomach) of the Ætherial Oyl of *Turpentine* (that which comes off between the Spirit and Oyl, in drawing off the common Oyle of *Turpentine*) in triple the Quantity of Virgin Honey, in a Morning fasting, for four, five, six, or eight Days at farthest, intermitting a Day now and then, as the Patient's Occasions require, or his Stomach suffers by it. In drinking, after it is down, large Draughts of Sack-whey, to settle it on the Stomach, and carry it into the Blood: And lastly, in taking a proper Dose of *Matthew's Pills* every Night, that Day the Medicine is swallow'd. This Course never fails to remove the Violence of the Pain, and to leave only a Weakness on the Part. To remove the grosser Remains, and strengthen the weaken'd Part,

Part, I order a Dram to two Drams of Flower of Brimstone, for some time, twice a Day, in a Tea-cup full of Milk. If through great Intemperance, or a violent Cold, the Patient relapses, I order the Repetition of the former Medicines for a Day or two, which commonly sets it a packing. And lastly, to strengthen the *Primæ Viæ*, and enliven the Spirits, I advise *Bath* or *Spaw* Waters with *Steel*, and Bitters with *Volatiles*; and perhaps pumping on the Part effected, which never fails to perfect the Cure in a genuine *Sciatic*. And I hope it may be of some use, to have a Method of Cure for this Distemper, so plainly laid down, so effectual in it self, so easy to the Patient, and so restorative of his Constitution in general, in respect of those Tortures, and the nauseous Load of Medicines the Afflicted are forced to go through in common Practice. The great Efficacy of this Course consists in the *Ætherial Oyl*: It has been common to prescribe a few Drops of the Oyl of *Turpentine* in cold *Rheumatisms* and fix'd Pains on the Joints: But this seldom proves effectual in the *Sciatica*: Whereas this *Ætherial Oyl*, having all the Penetration of the *Spirit*, together with the Softness and Detergency of the finest *Balsam*, but chiefly being of such Lightness, that any Quantity of it may be given, that can stay on the Stomach, or be kept down by frequent Draughts of any soft Liquor especially Sack-whey; which by its Milkiness uniting readily

ly with the *Ætherial Oyl*; penetrates into the least and finest Vessels, and the most secret Recesses of the *Animal Oeconomy*; opens their Obstructions, dissolves the glutinous Gellies in the Joints, cleanses the insides of the *Tubes*, and makes all pass by Perspiration. The Rule whereby to accommodate the Dose to the Patient, is to order it so, that it mayn't be so much as to recoil upwards; to prevent which, a large Quantity of Sack-whey is order'd: And it seldom moves above once downwards; but lest it shou'd go farther, in the subsequent Doses, the Pills take place.

LXXII. As to *Topicks* or outward Applications, to ease or relieve the Part affected in a Fit of the *Gout*, they are dangerous, unless discreetly manag'd. In the frequently mention'd *Cardinal Fits* of *Spring* and *Autumn*, when through Ignorance or Neglect of the Methods hitherto laid down, they shall happen *Regular*; I would by no means encourage any such outward Application of what kind so ever hitherto discover'd, except in the very last Extremities of Pain. In the *regular Gouts*, at those Seasons, these Fits are not to be tamper'd with in any manner, but in the way formerly directed. For the Habit being loaded with the *gouty* Humour and Salts, must be allow'd a time to discharge it self, and drive them out of the Body; otherwise Life must be endanger'd by a *putrid* or *malignant* Fe-

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ver: And these being the Seasons when the Humours naturally undergo some Alterations; if the *Gout* be thrown upon the extreme Parts, Nature must not be disturb'd in her Operations: But whatever is to be done, is to be directed to encourage and fortify her in her own way; and to assist her to expel the last Breathings of this Humour upon the Parts most remote from the Head and Heart, the two Sources of the Motion of all the Fluids: (which has been the Intention of all the Methods and Medicines prescrib'd in this Treatise :) For thus the Blood will be purify'd; the Spirits reliev'd from their Oppression; the Joints render'd pliable, and all the natural Functions set at Liberty. When these Fits are over, any thing that is just and probable, and attended with no Danger, for lessening the future Fits, and lengthning their Intervals, may be try'd. But in the Fits falling out of these Seasons; in the tedious and lingering Fits of those broken with Age, and habitual *Gouts*; a well chosen outward Application may be safely and successfully us'd; especially if at the same time gentle Stomachic Purges be administered; or a Blister on the Ancles or Wrists be open'd, to let out what may be repell'd by the *Topick*; and thereby to secure the noble Organs. For let Pretenders brag what they will, I know of no outward Application, hitherto discover'd, but what by its Sluggishness stops the natural Perspiration:

Or

Or by its Activity counter-acts the Direction of the Circulation; and consequently repels the Humour in some Degree or other. But by thus opening a Way for the Humours to pass elsewhere, the Part affected may be much reliev'd by proper Applications. *Fuller* and *Bates* give the Forms of some; and Dr. *Pitcairn* was exceeding fond of, and held as a great Secret, that which himself has publish'd in the last Edition of his Treatises, which is made of two Ounces of white *Arsenick*, and six Ounces of *Live-Lime Stone*, put into four Quarts of boiling Water, set in a warm Place twenty four Hours: Stoups of this apply'd warm to the Part, he had found effectual and safe. That which I would rather recommend, is Stoups of a Decoction of *Butterburr*, *Groundpine* or *Camomel* Flowers, or any *Aromatic* bitter Plant in Milk; or a *Pultis* of the Head of a Sack-whey Posset, or any such soft and active Application, to moisten, soften, relax and open at first; and towards the Decline of the Fit, a *Mithridate* or *Venice Treacle* Plaister; the *Emplastrum Stomachicum Magistrale*, or the like, to strengthen, warm and comfort; especially if with these last a stomatic warm Purge be joined. As to *symptomatic Gouts*, there can be no Place for them, in the Doctrine hitherto laid down. For on the Supposition, that the *Gout* is owing to a particular Texture and Conformation of Parts; where that Texture and Conformation of Parts

is, and the Materials for forming the *gouty* Humour is supply'd, there the *Gout* must necessarily be, without the Concurrence of any other Distemper : And where these are not, there it cannot be, let the Person be subjected to what other Distemper soever. And if a Person be subjected to two Distempers, in the Cure of the one, due regard is to be had to the Cure of the other. What has been said is all I intend at present on this Subject.

LXXIII. The *Scurvy* is become so universal a Distemper, of late; in these our *northern Climates*, amongst the better, as well as the meaner Sort, (with this Difference tho', that it is much more *fatal* and obstinate in the *former*, than in the *latter*, from their more complicated Luxury, and their habitual Laziness) that in one Shape or other, it makes, originally, three Fourths of all the *chronical* Distempers in *England* : and is connected with, and accompanies all the rest. Yet in all my Observation, or Reading, I never knew one Person so perfectly cured that he did not relapse, by returning to the same Method of Living, which first brought on the Distemper ; and I think it may even more justly be reckon'd the *Reproach* of *Physic*, than the *Gout* it self; for tho' it does not torment its Subjects so cruelly as the *Gout*, yet the Injuries it does the Head and the *nervous* System, the *Hypochondriacal*, *Asthmatical*, and *Hydropic* Diseases

eases it brings on, damp the enjoyments of Life more, and hasten its *Period* sooner than the Gout possibly can : hence most of the *hysteric* and *hypochondriac* Distempers : Hence the *Melancholy*, *Madness*, *Self-Murderers*, and even the *Barrenness* amongst the better Sort, that abound here in *England*, more than in most other Parts of the World, proceed. I have only touch'd on this Distemper by the by ; from having had so much Occasion to speak of the Advantages of a *Regimen*, or Diet, the only certain Cure of this obstinate Malady ; and therefore I shall omit all Enquiries into the Nature, and Cause of this Distemper, and of the Method of Cure advised by others being of the Opinion that tho' Medicines may palliate and relieve the *Symptoms*, yet nothing but a Course of Living, quite contrary to that which produced it ; or stepping the same Paces backwards, as were made forwards, can perfectly root it out, or effectually relieve it for any Time : That is, by abstaining from Flesh, Fish, and strong Liquors, in proportion to the former Excesses in Living, committed ; and joining to this Exercise, *Vomits*, *Bitters*, *Specific*, *Antiscorbuticks*, gentle *Stomach Purges*, *Chalybeats*, and mineral Waters, to quicken the Relief ; but in a general *Cachexy*, and broken Constitution, arising from a *scorbutick* Habit, nothing can cure, or effectually relieve, like a *total Milk Diet* ; which long continu'd in, will by far
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more safely and certainly cure this Distemper, than it will the *Gout* it self, provided always, the Party be not far past the Meridian of Life; For then the natural Heat is too far spent, for so cooling a Diet. And that he begin, and leave it by very slow Degrees. This may be done in Part, with great Benefit and Safety, for six Weeks every Spring, by those who labour under a deep Scurvy. Living a Month upon Bread, and small Beer only, will fasten the Teeth, when they are dropping out, thro' the Sharpness of the scorbutic Salts, when nothing else on the Earth can do it. Any vegetable Diet will do the like, tho' not so quickly, and so easily.

LXXIV. I have been long of the Opinion, that all *chronical* cutaneous Eruptions, Scabs, Foulnesses, and Sores, for the most Part, sprung from two Sources only, *viz.* The Scurvy and the Pox; and that the first was of a *northern* Extraction, owing its Origin to the *Gluttony* and *Intemperance* of the colder Climes; as the latter was of a *southern* Extraction, arising from the *Lasciviousness*, and Uncleaness of the warmer Countries; and that it is this Difference of their Origins, that makes them so different in their Stubbornness, or Facility, in admitting a Cure. The *Scurvy* arising from a *Malignity* convey'd by slow Degrees into the Blood, and from it into the most distant *Fibre* and Solid, is so difficult in its Cure, that as I
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have observed before, no Methods, except a total Abstinence from Fish, Flesh, and strong Liquors, is sufficient so to extirpate it, but that it will return with all its wonted Fury; if fewelled by an *Animal* Diet, and generous Liquors. Whereas the Pox manifesting it self sooner, with more painful and frightful *Symptoms*, and deriving its Infection from more *superficial* Causes never fails of a Cure, till it has arriv'd at its last Stages, or Nature is too weak to undergo it; and as in the *southern* Countries, the *Scurvy*, by reason of the constant free Perspiration of the People, and their living mostly on *vegetable* Food, is not known; and the *Pox* is carry'd off by the slightest Remedies: So in the *northern* Countries, from contrary Causes, the *Scurvy* is incurable, and the *Pox* is only cur'd with much Pain, and by the most violent and active Remedies. And as by the History of Diseases, we are inform'd, there have been *Symptoms* of these two Distempers in all Ages so we are certain, that they both were as different in *former* Ages, from what they are *now*, as was the natural Simplicity and plainness of *Living* of these *early* Times; from the various, and complicated *Luxury* of our Days: Or as was the *Pen-gun* Artillery, which was sufficient, and effectual in vanishing these Distempers among them, to the *Bombs*, and *stink Pots* necessary among us. To these two original Distempers, all the *scurbutic* Eruptions, and
pocky

pocky Foulnesses ; all the *Ringworms*, *Itches*, *Scrubado's*, *Leprosies*, *Elephantiasis*, and even the *Kings Evil*, or *Scrophula* it self, in these our *northern* Climates, owe their Being. And to which of these two in particular, each single Case owes its Origin, may be always determin'd by its Facility, or Stubbornness of admitting a Cure : For if any of them recurs, after all possible Methods of Cure, even a *Salivation* it self, we may readily conclude it of the *scorbutic* Kind, and that therefore nothing will keep it within Bounds, but a low Diet, and cool Applications. If it yields, and is perfectly cur'd, then must it have been of the *pocky* Kind in its first Principle, tho' the malignant Taint may have been contracted so many Generations before, that there is no guessing whose the *original Sin* was. Besides, that there are more Ways than one of receiving this *Infection*. To conclude, I have always observ'd, that as the *active*, mercurial Medicines, reliev'd, and at last perfectly cur'd the latter : So they no less certainly enrag'd, and exasperated the former Kind of Evil, as they do in the original Distempers, from which they respectively spring ; and that nothing succeeded so well in the *scorbutic* Kind, as Asses Milk, sweetening Powders (*Cinnabar*, *Native*, or of *Antimony*, *crude Antimony* in powder, *Æthiops Minerals*, &c.) gentle Vomits, a cool Diet, *mineral* Waters (*Bath*, *Holt*, and *Bristol*) and such other easy Methods, as preserv'd the

the *Individual* till the Age of *Puberty*, when a stronger Perspiration, a more active, and stirring manner of Life, and other Drains common to that Age, draw off the Malignity which then, if at all, happens.

LXXV. There is a Difference, if not a Distinction, between the *Gout* and *goutish* Disorders: These last having a great many *Symptoms* of the *Gout*, tho' they have neither the Violence of its Pain, nor the Regularity of its Periods. Thus for Instance, *White Swellings* upon the Ancles, Knees, and other Joynts, which when fixed there, beget only a Stiffness, or Weakness, and but little Pain, yet, like the *Gout*, when translated upon the *Guts*, it produces a *Diarrhæa*; when upon the Stomach, *Vomiting*, Nauseating, and Sicknesses; in the Head, Heaviness, Confusion, Giddiness, and Pain; and like the *Gout*, also requires generous Cordials, and active Medicines, to banish it to its proper Seat, and imprison it there, which nothing but what enriches, and exalts the Blood, together with what can contract the nervous *Fibres*, can do: These *White Swellings* being a Spice, or weaker Degree of the *Struma*, or *Kings-Evil*. Hot and *inflammatory* Rheumatisms have all the *Symptoms* of the *Gout*, and like it, change from Place to Place, and by over violent Evacuations may be translated upon the noble *Organs*; and by the Way, it may not be amiss

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to observe, that excessive *Bleedings*, and other violent *Evacuations*, constantly bring a *Hectic*, or a *Dropſy* on the Patient in this Caſe, Diſeaſes of a much more dangerous Nature in themſelves, and far more difficult to be cur'd, than the original one. Therefore in this Diſtemper, after premising only ſo much Bleeding as will prevent a Fever, and Mortification, and ſomewhat abate the Pain (which gentle Doſes of *Camomil*, and *Gum Guaicum*, will do more effectually, tho' not more ſpeedily, than Bleeding it ſelf) the reſt is to be done by large Doſes of the *Bark* and *Æthiops Mineral*, mixt; and a relapſe prevented by gentle Doſes of *Gum Guaicum*, with *Antimony* Diaphoretick, and *Cinabar* of *Antimony*. But of this enough. Of this gouty Kind alſo, is the *nervous* Sharpneſſes of hyſterick Women, which ſometimes, is a Pain in the *Forehead*; a violent Stitch and Pulſation, fix'd over one of the *Eyes*; a Coldneſs in the *Top* of the Head, on the *Temples*, and almoſt all other Parts of the Body by Turns, a Pain in the *Teeth*, the *Jaws*, the *Stomach*, the *Sternum* and the *Guts*, is a *Strangury*, *Teneſmus*, a *Cholic*, the *Gout*, and the *Gravel*: In ſhort, every Thing, and perhaps nothing but a *Flatus* or Wind twitching ſome Branches of the Nerves, which makes others ſuffer with them by Conſent. And this requires that with the Cordial Strengtheners, *nervous*, and *antihyſteric* Medicines, *Opiats* ſhould always be join'd, and then only.

LXXVI. I have been inform'd, with great Concern, of some small Inconveniences that have happen'd in the Usage and Application of some of the Rules, and Remedies advis'd for the *Gout*, in the first Edition of this Treatise. I did endeavour to lay down the Advices there given, with all the Plainness and Precision I could: But I begin now to be sensible, there is some Danger in the Application of the most innocent Remedies, without the Direction of a proper Person, experienc'd in the Nature of Medicines, acquainted with the Difference of the Constitutions, and skill'd in the History of Diseases. If one afflicted with a *nervous Gout* should use *Sulphur* for a Remedy, unless it be in a very small *Dose*, or taken very seldom, he can never succeed, because *Sulphur* purges, and relaxes the *Fibres* of the *alimentary* Passages, which will bring on a Disease, far more deplorable than the *Gout*, and to which the *Gout* it self brings its Subjects on its last and fatal Stages only: Whereas to cure a *nervous Gout*, Medicines are indicated, which gently evacuate, and re-stringe at the same time, such as *Rhubarb*, *Aloes*, and the like, or neglecting the *Gout*, the nervous System is to be strengthened and wound up first by *Crocus Martis* *Astringens* the *Bark*, *Orange-peel*, and such other Remedies, as are directed above, in nervous Cases, whereby the Strength being recover'd

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and the Spirits enliven'd, most of the *gouty* Symptoms will fly of themselves. On the other Hand, should a Person, suffering under an *humorous Gout*, where the *System* of the Nerves are stiff, and stretch'd, use the *Bark*, and such other Remedies, as are recommended in a relax'd State of the Nerves, he must enrage his *Gout*, seeing gentle Evacuations, and soft Emollients are there indicated. Lastly, in the Use of *Sulphur*, should the Body be render'd too *glib* and *slippery*, it ought to be diffus'd for some Time; and *light Bitters*, or *Rhubarb* taken in its stead. Add to these, that the Doses of all such Remedies ought so to be accommodated to the Constitution, as never to sink the spirits, or weaken the Strength, but rather to increase both, which they will always do, in a proper Dose. Without such Cautions duly weigh'd, and accurately apply'd, no general Directions will universally succeed in the *Gout*, or any other chronical *Distemper*.

LXXVII. For a concluding Observation, we shall take notice, as it is only the *Rich*, the *Lazy*, the *Voluptuous*, who suffer most by the *Gout*: (I mean *acquir'd Gouts*, and those hereditary ones enrag'd by *Luxury*) so those only, who have spent their Life-time under its Tortures best can tell, what astonishing Miseries *Wealth* and *Vice* bring upon human Kind! When the *gouty* Humour has seiz'd
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upon all the *noble Principles* of Life, when it has broken, subdu'd and obstructed all the *fine Pipes*, and slender Passages, in whose Openness and Soundness all the *exquisite Sensations*, all the *delicate Usages* of the *animal Faculties* consist. When nothing but Pain, and melancholy, frightful Ideas, horrible Dreams and black Despair remain; who wou'd not have parted with the *richest Delicacies*, the most *delicious Wines*, and the most *enticing Vices*, for a plain, simple Diet, an useful laborious Life, Freedom from Pain, and a good *Conscience*? TEMPERANCE only, divine, innocent, indolent and joyous *Temperance*, can cure or effectually relieve the *Gout*. For let Us, or our Brethren the *Quacks*, brag what we will,

Tollere Nodosam nescit Medicina Podagram.

F I N I S.





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